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ABSTRACT

The undergraduate curriculum in liberal arts colleges has become extremely standardized in the past 20 years in spite of demands for educational experimentation and reform. This document presents an examination of 6 undergraduate curriculum structures at 26 liberal arts colleges to determine the amount of reform actually taking place. The 8 structures are: advising, general education, faculty structure and concentration, course and comprehensive examinations, extradepartmental curricular inputs, and grading. The result is a handbook analyzing the strengths and weaknesses of the curricular features examined. All of the structures suffered from the reluctance of students to use unstructured or self-directed mechanisms and the primary faculty commitment to departmental or professional activities. (Author/HS)

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UNDERGRADUATE CURRICULUM EVALUATION

A Study of Eight Undergraduate Curriculum Structures at Twenty-Six Colleges

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June 1972

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U.S. DEPARTMENT OF
HEALTH, EDUCATION AND WELFARE

Office of Education
Regional Research Program
Boston, Massachusetts

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Final Report

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UNDERGRADUATE CURRICULUM EVALUATION

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U.S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE

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Boston, Massachusetts

This study examines eight undergraduate curriculum structures--Advising, General Education, Faculty Structure and Concentration, Comprehensive Exams Senior Year, Extradepartmental Curricular Inputs, and Grading. Liberal arts colleges, which all have the same basic curricular design, have in recent years made many changes in these eight areas, yet little data regarding the changes has been made available. To collect this data, twenty-six colleges, representing the cross-section of liberal arts curricula were studied. Three and four year schools were chosen which sponsored several programs of interest, were of manageable size for interviewing and geographically feasible to visit.

The evaluation program had two components--the human and the numerical. The human component--what it is like to be part of a program--was obtained by interviews with students, faculty and administrators. The numerical component was derived from statistics gathered from registrars' records or offices of institutionalized research.. The result is a handbook analyzing the strengths and weaknesses of the curricular features examined. All of the structures suffered from the reluctance of students to use unstructured or self-directed mechanisms and the primary faculty commitment to departmental or professional activities.

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TABLE OF ABBREVIATIONS

Cal. Tech: California Institute of Technology

C.C.: Contemporary Civilization (General education program at Columbia University)

E.C.P.: Experimental College Program (at Berkeley)

F.P.C.: Florida Presbyterian College

GPA: grade point average

GISP: Group Independent Study Project (examined at Brown)

H/HP/P/F: honors/ high pass/pass/ fail

ISP: Independent Study Project (examined at New College)

JMC: Justin Morrill College (of Michigan State University)

MIT: Massachusetts Institute of Technology

MOT: Modes of Thought (courses at Brown)

RC: Residential College (of University of Michigan)

RCS: Residential College Seminars (at Yale University)

SWOPSI: Stanford Workshops on Political and Social Issues

SCIRE: Student Center for Innovation in Research and Education (at Stanford University)

UCE: Undergraduate Curriculum Evaluation (the official title of this study)

USSP: Unified Science Study Program (at MIT)

UWGB: University of Wisconsin, Green Bay

UCSC: University of California, Santa Cruz

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Arthur Levine
John Weingart

June, 1972

INTRODUCTION

This report is the result of an examination of undergraduate college curriculum conducted from September 1970 through June 1971.

The purpose of this study was to collect data on reform efforts at undergraduate colleges with the hope that the analysis and distribution of such material would provide insights into the operations and effects of curricular change.

The liberal arts college curriculum has become standardized since the end of World War II. Even the so-called "experimental colleges" are variations on the same theme. This curriculum consists of both a breadth and depth component. The breadth is provided by liberal or general education, and the depth is provided by concentration. The Boston Globe (June 2,1970) noted that the students then graduating from college had "just completed an academic diet which has become as standardized and predictable as a frozen TV dinner." This allegation can be substantiated by looking at any liberal arts college catalogue. This is further illustrated by examining some of the major curriculum reports published in the last few years. For example, the following are among the most influential curriculum reports released within the last five years.

The Making of a College describes the plans for Hampshire College, an innovating school, which opened in the Amherst basin in 1970. It was written by Charles Longworth and Franklin Patterson, first Vice-President and President of the College.

Education at Berkeley is a report of a faculty committee chaired by Charles Muscatine, on education at the University of California, Berkeley.

Future of the University is a report of the Executive Planning Commission of the University of Oklahoma.

Critique of a College contains a report of the faculty Commission of Educational Policy at Swarthmore College.

The Reconstruction of an American College is a report on Rutgers University by Warren Sussman, professor of History.

Working Paper on Brown University is an academic report written by two students. Ira Magaziner and Elliot Maxwell.

Each of these works covers the same basic topics--advising, concentration, general education, grading, examinations, freshman year, length of stay at the college, interdisciplinary approaches to education, improvement of teaching, and course structure. But each presents recommendations based only on theory and educational philosophy rather than on actual data from existing programs.

The University of Oklahoma report remarks that, "Colleges and Universities from Berkeley to Swarthmore have questioned nearly everything about themselves except the premises upon which their undergraduate programs are based." However, if the process of questioning is to yield any positive results even "the premises on which undergraduate programs are based" must be considered and in considering them, a careful consideration and analysis of all new data must be carried out. Abstract philosophical study is not sufficient.

Today much educational reform is undertaken with the dual purpose of appeasing students while changing little substantively. The result is usually a compromise between students and faculty which achieves neither's educational ends. This haphazard system of speculation and compromise is certainly no way to provide a sound educational system for a college. For this situation to be overcome and serious innovation to occur, cold hard facts are necessary.

To collect these facts, the authors chose to study programs at twenty-six colleges. The schools were chosen to represent the cross-section of efforts in the liberal arts. The colleges chosen included both public and private, old and new, and male, female and co-educational schools. Nevertheless, it was felt that a study of this size could not hope to do justice to all curricular offerings in undergraduate colleges, and some limitations were therefore imposed. Only three and four year liberal arts colleges were studied, and schools with student-faculty ratios smaller than 5-1 or larger than 20-1 were excluded. This was not intended as a value judgment upon the efforts of such colleges, but only as a realization of the limitations of a small study. Schools were chosen which sponsored several programs of interest, were of manageable size for interviewing, and geographically feasible to visit. It was felt that it would be possible to study thirty schools, but four were eventually eliminated for various non-curricular reasons.

The colleges chosen and the areas studied at each are indicated on the chart on the following page. It

OPICS EXAMINED T SAMPLE OLLEGES	STUDENT-TAUGHT COURSES	SENIOR YEAR	INTERDISCIPLINARY COURSES	INDEPENDENT STUDY	GRADING	GENERAL EDUCATION	DEPARTMENT STRUCTURE	COMPREHENSIVE EXAMINATIONS	ADVISING	CONCENTRATION
NTIOCH COLLEGE	+		+		+	+			+	+
RD COLLEGE		+			+		+	+	+	+
WDOIN COLLEGE		+			+					+
RANDEIS UNIVERSITY			+		+					
ROWN UNIVERSITY			+	+	+	+				
L. INST. OF TECH.					+	+			+	
OLUMBIA UNIVERSITY						+				
LORIDA PRESBY- ERIAN COLLEGE	+		+	+	+	+	+	+		
RVARD UNIVERSITY						+				
VERFORD COLLEGE					+	+		+	+	+
.I.T.				+						
STIN MORRILL COLLEGE ichigan State niversity		+		+		+			+	+
EW COLLEGE		+		+	+	+	+	+	+	+
RESCOTT COLLEGE					+	+	+		+	+
EED COLLEGE		+			+	+	+	+	+	+
. JOHN'S COLLEGE					+	+		+	+	
ARAH LAWRENCE COLLEGE	+		+	+	+	+			+	+
TANFORD UNIVERSITY	+		+			+				+
RINITY COLLEGE	+		+	+	+	+			+	+

TOPICS EXAMINED AT SAMPLE COLLEGES	STUDENT-TAUGHT COURSES	SENIOR YEAR	INTERDISCIPLINARY COURSES	INDEPENDENT STUDY	GRADING	GENERAL EDUCATION	DEPARTMENT STRUCTURE	COMPREHENSIVE EXAMINATION	ADVISING	CONCENTRATION
TUFTS UNIVERSITY	+		+	+				+		
U.C. BERKELEY						+				+
U.C. SANTA CRUZ	+		+	+	+	+	+	+	+	+
RESIDENTIAL COLLEGE (Univ. of Michigan)					+	+				
UNIV. OF WISCONSIN GREEN BAY					+	+			+	+
WESLEYAN UNIVERSITY					+	+		+	+	+
YALE UNIVERSITY	+		+	+		+				+

should be noted that several of the programs of interest at these schools were not studied because of time problems, a lack of availability of either data or appropriate individuals, or because they did not fall within the scope of the study.

A brief description of each of the colleges examined, with an explanation of the methods of sample interviewee selection follows:

ANTIOCH COLLEGE:	Yellow Springs, Ohio; Student Population-1850; Faculty Population-100; Four eleven-week quarters permit division of the student body into two colleges of about 925 students each. While one group is on campus the other group is involved in field experiences. In February, 1971, 100 students, few of whom were freshmen, were randomly selected as interviewees. Freshmen were minimized as a sample component because it was felt they lacked experience with the curriculum. Randomness in the sample was insured by interviewing in most dormitories and at the dining halls, and snack bar. Twenty-five faculty members were also randomly selected, with quotas established only by division size. In addition, three administrators were interviewed.
BARD COLLEGE:	Annandale on the Hudson, New York; Student Population-625; Faculty-60. In March, 1971 60 students-sophomores, juniors and seniors-were interviewed, randomly selected by interviewing in the dining hall, dormitories, and snack bar. Freshmen were not interviewed because of their lack of experience with the Bard curriculum. Similarly, 19 faculty were randomly selected and interviewed. Each division coincidently was well represented with the exception of the arts division. Two administrators were also interviewed.

BOWDOIN COLLEGE:	Brunswick, Maine; Student Population-946; Faculty Population-120; Senior Class size-230; Professors leading Senior Seminars Fall '70-19. In December, 1970 interviews were conducted with members of the senior class and faculty members who had participated in the Senior Seminar Program. The sample was composed of 43 students and 7 professors. At the time of the interviews, students and faculty were still involved with their seminars, and most had already finished their individual or group projects, and were holding the second and final group or class meetings.
BRANDEIS UNIVERSITY:	Waltham, Mass.; Student Population-2100 undergraduates, 725 graduates; Faculty Population-300. Interviews were conducted with all 6 faculty members and all 6 student members, and three involved administrators of the Brandeis Flexible Curriculum Committee in May, 1970. All other information is based upon studies of University grading practices by Jacob Cohen, department of American Civilization, examining departmental practices for 1964-65 and 1969-70, and Matthew Sgan, Dean of Students, (Journal of Higher Education, Nov., 1970, pp. 638-646), examining letter grade achievement in pass/fail courses.
BROWN UNIVERSITY:	Providence, R.I.; Student Population-Brown-2774, Pembroke-1117, Graduate-1493; Faculty Population-750 (including faculty at all levels of the University, i.e., research, professional, schools, etc. Interviews were conducted during December and March of the academic year 1970-71. During December, 20 interviews were recorded with faculty, students, and administrators who were or are intimately involved with the curriculum revision. In March, random interviews were conducted with 225 students, 60 faculty, and 4 administrators. Students were randomly selected

BROWN UNIVERSITY: (Continued)

by interviewing in the dorms, at the library, and miscellaneously around the campus, i.e. University buildings, fraternity houses, snack-bar, etc. 40 faculty were selected randomly from those who had taught Modes of Thought courses (MOT) with an attempt to get as wide a distribution of departments as possible. (At the time of the study, 122 MOT courses had been taught by less than 100 faculty.) Furthermore, 20 faculty were interviewed who had not participated in MOT's. These too were randomly selected with the limitation that departments not offering MOT's were included.

CALIFORNIA INSTITUTE OF TECHNOLOGY:

Pasadena, Calif.; Student Population-Undergraduate-722, Graduate-762; Faculty-660.

Interviews were conducted in January, 1971 with 76 sophomores, juniors, and seniors. Randomness was insured by interviewing in dormitories, and choosing the number interviewed in each dormitory in proportion to the size of the dormitory. The sample contained few off-campus students, as few students live off-campus.

The faculty sample contains 17 faculty and 2 teaching administrators. Each of the faculty interviewed had taught freshmen courses before and after the grading change. These individuals represent over 75% of those teaching commonly enrolled freshmen courses before and after the grading change. One other administrator was also interviewed.

COLUMBIA UNIVERSITY:

New York, N.Y.; Student Population- Columbia-2700, Barnard-1920, Graduate-9000.

In December, 1970 and March, 1971 interviews were conducted with 3 administrators, 14 randomly chosen Contemporary Civilization (C.C.) faculty of a 1970-71 staff of 27, and 5 faculty responsible for staffing C.C.

Student interviews were not conducted because the Course Evaluation employed a larger sample than would have been obtained in the UCE interview format, and the Course Evaluation findings were presented in a clearly quantified manner. Additional sources used were the 1969-70 Student Course Evaluation sections on C.C.; "Contemporary Civilization; A History and Procedure"; "C.C.A.-Final Report, 1967-68"; "*Columbia College Today*," Summer 1970; "C.C. Under Seige", and Daniel Bell's *Reforming of General Education*.

FLORIDA PRESBYTERIAN COLLEGE:	St. Petersburg, Fla.; Student Population-1080; Faculty-80. Interviews were conducted with 108 students and 23 faculty members, which included 3 individuals in administrative positions. Students were randomly selected by conducting interviews in dormitories, dining hall, and the bookstore. Faculty were randomly selected within each division.
HARVARD UNIVERSITY:	Cambridge, Mass.; Student Population-Harvard-4779, Radcliffe-1200; Faculty Population-725 full time and 850 part time teaching fellows. The Freshman Seminar Program examined at Harvard in November, 1970 had approximately 700 students and 40-50 faculty each year. 14 of 46 faculty participating in the program in 1969-70 were randomly selected as were 100 students (70% sophomores or 10% of the 1969-70 participants). Interviews with students were conducted in dormitories and dining halls. Few Harvard students life off-campus.
HAVERFORD COLLEGE:	Haverford, Penn.; Student Population-600; Faculty-85 full time and part time. In April, 1971 interviews with students, faculty, and administrators were conducted. 60 students were randomly interviewed in the dormitories concentrating primarily upon sophomores and freshmen--only 15 juniors and seniors were interviewed. This selection of students was employed because the academic reforms examined effected extensively only the classes of '74 and '73. 20 faculty members were randomly interviewed with the bias that 75% had participated in the freshman seminar program. 2 administrators were also interviewed.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY:	Cambridge, Mass.; Student Population-Undergraduate-3900, Graduate-3800; Faculty-700. In December, 1970 interviews with the administrative staff of the Unified Science Study Program (USSP) were conducted. Staff consisted of 6 MIT faculty and 15 research appointees. 41 MIT freshmen and 6 sophomores were involved in the program. At the time of the interviews, students who had been involved were scattered all over MIT and the rest of the U.S. As a result, MIT data rests largely upon reports by Judah Schwartz, Director of USSP, entitled "USSP, The First Year," and Sandra Morgan, entitled "Back to the Classroom", a report on the sophomores in the regular MIT program who spent all or part of their freshman year in the USSP.
JUSTIN MORRILL COLLEGE:	At Michigan State University, East Lansing, Michigan; Student Population-850, Faculty-32. Justin Morrill College is a residential college at Michigan State University. In November, 1970, 8 faculty members, 50 students, and 1 administrator were interviewed. 4 of the 8 faculty interviews were arranged by the administrator and four were chosen randomly. The 50 students were chosen randomly by interviewing in the dining hall, snack bar, and the College's main lobby. The sample comprised about 10% of the freshmen and sophomores in the College. Juniors and seniors were less involved with the College through emphasis upon major and field study.
NEW COLLEGE:	Sarasota, Florida; Student Population-500; Faculty-42 full, 10 parttime. Interviews were conducted with 50 students and 20 faculty. The interviewees were selected randomly, with the exception that freshmen were excluded. In addition to the data from the interviews, the New College study made use of much written material including an Institutional Self-Study completed in 1971, and numerous study reports made available by the College.

made available by the College.

PRESCOTT COLLEGE:	Prescott, Arizona; Student Population-300; Faculty-44; In January, 1971 interviews were conducted with students, faculty and administrators. 57 students were selected for the sample through random dormitory interviewing. 20 faculty were selected by interviewing the Center directors and randomly chosen other faculty. 1 administrator was interviewed.
REED COLLEGE:	Portland, Ore.; Student Population-1100; Faculty-100 full time. In January, 1971 random interviews were conducted with 25 faculty and 75 students. Freshmen were excluded because of their lack of experience with the Reed curriculum. 3 administrators were interviewed.
ST. JOHN'S COLLEGE:	Annapolis, Md.; Student Population-350; Faculty-48. In April, 1971 interviews were conducted with 47 randomly selected students and 16 randomly selected faculty. 3 administrators were interviewed.
SARAH LAWRENCE COLLEGE:	Bronxville, N.Y.: Student Population-553; Faculty-110. In March, 1971 interviews were conducted with 50 students and 24 professors, all randomly selected. Freshmen were excluded from the study because it was felt they lacked sufficient experience with many of the structures being investigated.
STANFORD UNIVERSITY:	Stanford, Calif.; Student Population-Undergraduates6078, Graduates-5244, Faculty-967. Interviews were conducted with 76 undergraduates and 26 professors. The interviewees were selected randomly, with the exception that freshmen were eliminated from the sample because it was felt their experience with the programs was too limited. In addition to using the results of the interviews, talks with several administrators were helpful. Much written material was also made available which was invaluable. This included: "History of the Freshman Seminar Program," Freshman Seminars descriptive bulletin, Brochures of Stanford Workshops on Political and Social Issues,

Several issues of The Stanford Daily, Evaluation of Student Center for Research in Education and Innovation, 1971.

TRINITY COLLEGE: Hartford, Conn.; Student Population-1400; Faculty-110.
100 students representing principally the first two years were randomly selected for the study. Emphasis was placed upon the first two years because these are the years it was felt were most effected by the curricular change and the number of students who had participated in the upper-class structures were far too few to locate randomly, and any other method would have been unfeasible. A little over one-third of the sample were juniors and seniors. Students were interviewed in the snack bar and dormitories. 34 faculty were interviewed. 29 of the faculty were chosen randomly from a list of over 50 faculty who had participated in the Freshman Seminar Program while the remaining 5 were randomly chosen to round out the divisional representations. 2 administrators were interviewed.

TUFTS UNIVERSITY: Medford, Mass.; Student Population-Undergraduates at Tufts 1277, Jackson-1045, Graduate-2747; Faculty 2285
The Tufts Experimental College was examined in May, 1971. The information was derived largely from extensive interviews with Gail Carlson, Coordinator of the College, and Barbara Corprew, one of the student members of the governing Board of the College. Interviews with representative numbers of students and faculty participants in the College were not conducted because the visit to the College occurred during final exams and many students had already left campus, but more importantly because surveys of students and the literature available were satisfactory and covered almost all the areas which would have been touched by interviews.
The written material used was as follows:
"The Experimental College of Tufts University"-Report to Albert D. Ulman, Provost of the University, April 28, 1970-Final report August 7, 1970 prepared by Florence Trefethen.

"Report to the Faculty of Arts and Sciences of the Ad Hoc Committee to Evaluate the Experimental College"-Spring, 1968.
"The Experimental College"-a 12 page description prepared by the University for the public; "Experimental College"-Tufts Alumni Review, Fall, 1969; Experimental College Catalogue-Bulletin 17, Spring, 1971; Ditoed "Evaluation data from Fall 1970" regarding Experimental College seminars. Particularly helpful was the report prepared by Florence Trefethen, which provided much of the historical material used. It also contained a substantial amount of statistical information based on College records, and on interviews and questionnaires obtained from participants in the College.

UNIVERSITY OF CALIFORNIA, BERKELEY:

Experimental College Program; Berkeley, Calif.; Student Population-150; Faculty-6.
The Experimental College Program at Berkeley was examined in January, 1971. Interviews were conducted with 4 faculty members who had participated in the second cycle of the program. In February, 1971 questionnaires were sent to the second cycle faculty, with the exception of the Director, Joseph Tussman, who was interviewed at Berkeley; 2 of the 5 faculty responded. At the same time questionnaires were sent to 75 students from a list of those who had completed the second cycle-15 responses were received. The sample therefore consists of 6 of the 12 faculty who had participated in the Experimental College Program and 25 of the 90 students who had completed the second cycle program.
In addition, *Personality Development in Two Different Education Atmospheres by Robert Suczek and Elizabeth Alfert for* the U.S. Office of Education was heavily relied upon.

UNIVERSITY OF CALIFORNIA, SANTA CRUZ:

Santa Cruz, Calif.; Student Population-Undergraduate 600 per college (The Sixth College opened in 1971-72), graduate-225 (going to 18% of the student body in 1974-75); Faculty-40-50 each college totaling 250 in 1970-71.
Cowell, Crown, and Adlai Stevenson College

were examined during January 1971 at Santa Cruz. 15 faculty from each college were randomly interviewed as well as 45 students from each college. Freshmen were not interviewed due to their lack of experience in the program. 8 administrators were interviewed. The other functioning colleges at the time of the examination, Merrill and College V, were excluded because they were opened more recently and had not yet graduated their charter class.

RESIDENTIAL COLLEGE, UNIVERSITY OF MICHIGAN: Ann Arbor, Mich.; Student Population-900; Faculty-85.
The Residential College was visited during November, 1970. Interviews were conducted with small student, faculty, and administrator samples, however the data relies primarily upon reports by Bruce Francis, entitled "Reactions of Residential College Faculty to the College, the Students, and the Core Curriculum, 1969-70, based upon interviews with 43 Residential College faculty and staff of which 21 were chosen for curriculum knowledge and 20 were chosen randomly, and by Bill Moore entitled Student Comments on the Core Curriculum at the R.C. 1969-70, based upon a representative sample of 100 Residential students.

UNIVERSITY OF WISCONSIN, GREEN BAY: Green Bay, Wisc.; Student Population 4000; Faculty-260, UWGB was visited in February, 1971. The programs were too new to attempt an evaluation. The school was two years old and no one had yet gone through the whole program. The report was intended only to show the UWGB program in operation. Dr. Bela Baker, Associate Dean of the College, was extraordinarily helpful in arranging interviews and supplying information. 10 professors, most of whom were either Deans or Directors, a group of students, and several administrators were interviewed. All these people were very helpful in giving a clear and hopefully accurate picture of how UWGB works. It should of course be noted, that the faculty interviewed were few in number and far from random.

WESLEYAN UNIVERSITY:

Middletown, Conn.; Student Population 1450; Faculty-300.
The study of Wesleyan did not seek to interview students or faculty regarding the grading system with which the study was concerned since examination of similar systems at other colleges had achieved a pattern of results corroborated by a paper by the Dean of Faculty's office, written by John H. McMahon, C. Hess Haagen, and David Adamany entitled "*On Academic Standards and Procedures at Wesleyan.*"

YALE UNIVERSITY:

New Haven, Conn.; Student Population-Undergraduate 4000, Graduate 4365, Faculty-900.
Interviews were conducted in March, 1971 with 35 Yale faculty. While this represents but a small fraction of the Yale faculty, the selection was weighted to include a substantial number of professors who had participated in the Residential College Seminars or the Directed Studies programs; thus, about one-fourth of the faculty who participated in each program during the Spring term, 1970 were interviewed. Nevertheless, when the opinion of the entire faculty sample is cited with regard to the grading or general education, it should be remembered first that only a little more than 4% of the faculty was interviewed, and second that that group is more inclined to participate in non-departmental activities than the faculty as a whole. Students at Yale were not interviewed for several reasons. First, only a small percentage of the student body participated in half of the programs studied and it seemed unreasonable to either hope to find a significant number of participants by randomly interviewing amongst the 4000 students or to attempt to find the specific students who had participated. Second, and more importantly, the *Yale Daily News*, the student paper, *publishes a 170* page booklet, the *Yale Course*

Critique, which examines student opinion regarding both individual courses and several of the programs studied. Inquiries with several students, faculty, and administrators indicated that the Course Critique was considered to accurately reflect student opinion, and the seeming high quality of technique used in compiling the booklet, combined with the difficulties presented above, allayed the writer's usual fears of relying upon "official" publications.
Nevertheless, much written material was used in addition to the Course Critique.
They are listed below:
Many issues of the Yale Daily News.
Yale College Program of Study, 1970-71 (Catalogue).
Yale College Introductory Information, 1970-71.
Yale College Residential Seminars, 1969-70, 1970-71.
"Special Majors: Divisional IV - report of Committee on Honors and Special Projects."
"Grading Information" - Office of Educational Research.
Study of Graduate School opinion concerning a proposed grading change, by Assistant Dean Theodore S. Baker.

While the most heavily relied upon written material was cited, each of the twenty-six schools provided reports, studies, newspapers, and catalogues which were invaluable.

The actual evaluation had two components--the human and the numerical. The human component--what it is like to be part of a program--was obtained by interviews with students, faculty, and administrators. The numerical component was derived from statistics compiled for each program by a registrar or office of institutional research. The statistical data, in the area of concentration for instance, would consist of the number of students creating their own majors, topics of these majors, feedback from graduate and professional schools and employers, etc. In this way, a picture of what happened was obtained through statistics and the reasons why through interviews.

The technique employed in interviewing a college population was random selection of at least 10% of the students involved in a given program (much larger percentages for smaller programs), random selection of 20% to 25% of the faculty who had taught in the program for the past year or term (again larger percentages for smaller programs), and discussion with the various administrators involved.

The numbers 10% and 20% were chosen because they were the largest sample that could reasonably be interviewed as a result of the size and time limitations upon the project; however, these numbers were sufficient to give an adequate picture of student and faculty opinion. Randomness was achieved in student sampling by interviewing in many different places; dormitories, hang-outs, libraries, dining halls, snack bars, book stores, etc. The Dean of Student's office, school newspaper editors, and student government leaders were useful in providing information about student living arrangements and social habits. At a given school, the examining procedure might be as follows: Interview all people in dormitory rooms ending in the number three; or talk to everyone entering the dining hall, book store, or snack bar. The only restrictions made were that in schools with large off-campus populations, interviews were conducted in more public places than dormitories, in order not to lose an important segment of the student population. Faculty were chosen by contacting every Xth faculty member from a list of those who had participated in the program. The only restriction was that representation be given to each divison of the school, usually social science, humanities and science. However, this only resulted in special consideration at one school--Stanford. Larger percentages were interviewed in small programs where 10% and 25% amounted to only a few individuals, i.e., the Experimental College Program at Berkeley where 66% of the faculty (6 people) and 30% of the students (28 people)were interviewed.

Small deviations were made in examination design because of size at Brown University where only 8% of the students and 15% of the faculty were interviewed. In addition, at eight colleges, some portion of the examination procedure was omitted because the desired information was available through institutional research of satisfactory design. The data in each case was inspected closely before the research was accepted. At three other colleges, it was necessary to replicate studies because the research design deviated from that desired.

Various methods of interviewing were attempted. Initially, written questionnaires were circulated at the Residential College, University of Michigan, however, this was less than optimal. At Justin Morrill College, Michigan State University, uniform open-ended questions and note-taking were employed. Open-ended questions proved more successful than questionnaires, but note-taking was inefficient. Therefore, cassette-tape-recorder interviews were conducted at Harvard University and proved to be satisfactory. Uniform, open-ended questions and tape-recorded interviews were continued for the duration of the research.

The purpose of this report is to present, on a topic by topic basis, the data collected at the schools.

Before beginning, two apologies need to be made. First, the authors do not believe that the piecemeal reforms examined successfully confront the current problems of American higher education. However, these programs and structures were thought to provide a more realistic context for immediate minor curricular improvements than the more comprehensive overview necessary. It is also hoped that such programs will act as catylists for more major changes. Nevertheless, most of the easily adoptable innovations leave the basic problems untouched. In fact, while many of the innovations discussed were immediately beneficial to a college, most were hampered, or ultimately destroyed by the fundamental lack of purpose and coherence characterizing higher education.

Second, the authors would like to apologize for the use of masculine terminology, i.e., "he," "him," "his," etc. Such references were avoided when possible but plurals could not always be substituted and commonly understood alternatives have yet to be developed. It should be noted, however, that the overwhelming majority of college faculty members, and consequently of the faculty interview samples, are male.

ADVISING

Academic advising was studied at 11 of the 26 sample schools: Antioch, Bard, Brown, Haverford, Justin Morrill, Prescott, Reed, Santa Cruz, Sarah Lawrence, Trinity, and New College.

Nine of the sample schools (not including Sarah Lawrence and New College) employ a two part advising system designed to mirror the general education/concentration division. All of the schools, with the exception of Haverford, Trinity, and Sarah Lawrence, assign the freshman to a faculty advisor. At a majority of sample schools this is based upon preliminary major choice, although special interest and random assignment were also commonly used. After the student declares a major, academic advising becomes the responsibility of the concentration unit. All units assigned advisors and/or permitted a student to change advisors as often as desired. Sarah Lawrence and New College differ from this model in that their programs do not include concentration (see CONCENTRATION). As a result, the assignment of the post-freshman advisor is based upon criteria important to the student.

Advising was viewed as uniformly poor by faculty, students, and especially administrators at most sample schools. Faculty and student attitudes are collated in the table on the following page.

Though a large number of students, rarely a majority, indicated positive experiences, i.e., being able to obtain desired information, it was extremely rare that students (only 7% at Brown) noted the development of a good relationship with the advisor. The assignment of advisors based on student potential major choice or indicated interest was insufficient to cause, even occasionally, relationships to develop. Students said they oscillated so often between different majors that concentration was a poor criterion for assigning advisors.

At Bard, Prescott, and New College, however, students and faculty alike felt the College was so small that everyone got to know at least some students or faculty well. Similarly, many credited the size for producing "an informal environment" which encouraged easier discussion. At New College the informality existed to such a large extent that casual advising replaced, in practice, the planned system. Larger size, as could be expected, produced opposite results, worsening an already poor system. Because of increased size, faculty tended to know fewer of their colleagues and, as a result of departmental structure, faculty knew almost exclusively professors in their own or closely allied departments. At Brown, one of the

FACULTY AND STUDENT REACTIONS TO ADVISING AT SAMPLE SCHOOLS

STUDENT OPINION				FACULTY OPINION	
Positive	Negative	Uninvolved		Positive	Other
40%	27%	33%	ANTIOCH[1]	48%	52%
49%	30%	21%	BARD	75%	25%
16%	48%	36%	BROWN	10%	90%
Basically Positive			HAVERFORD[2]	Very Positive	
12%	30%	58%	NEW	5%	95%
50%	39%	11%	PRESCOTT	30%	70%
45%	15%	40%	REED	26%	74%
18%	68%	14%	STEVENSON (UCSC)	21%	79%
7%	33%	60%	COWELL (UCSC)	28%	72%
51%	35%	14%	CROWN (UCSC)	68%	32%
60%	28%	12%	SARAH LAWRENCE	82%	18%
46%	37%	17%	TRINITY	76%	24%

[1] Does not include freshmen advising.

[2] Includes only freshmen advising--upperclass advising was considered terrible.

The designation "uninvolved" signifies those students who felt no need to seek advice and by their own volition refrained from using the advising system. Faculty opinion was divided into 'positive" and "other"; the positive group consisting of those faculty satisfied with the nature of advising and the degree of success it achieved. As a result, the "other" group ranged from very mild to militant disaffection.

larger and more rigorously departmentalized of the sample schools, the situation was notably poor, while at Bard 92% of the faculty sample knew the college and their colleagues well enough to feel competent to advise in most areas or tell students where to get any information they lacked.

No incentive was offered faculty members for advising at any school. As a result, advising is an obligation which utilizes the time that could be spent on work that is rewarded, so that advising is given in heaping helpings to junior people. This means that the faculty having had the least experience with a school are the ones most often participating in the advising. The problem is most severe when the first year faculty member, knowing as little about the college as the student, is assigned to advising. Most sample schools indicated avoidance of the use of first year people, but in over half the programs examined first year faculty were found. One such advisor said he was "made an advisor the minute (he) stepped on campus." A significant number of students attributed the failure of their advising relationship to this situation.

Only at Sarah Lawrence did faculty have such a serious commitment to advising that they considered it part of their job responsibilities. Advising time was felt by faculty respondents to occupy a day and a half a week. Similarly, at Santa Cruz, which employs an interlocking faculty, one of the three colleges studied, Crown, was significantly more successful in advising than the others possibly owing to its emphasis upon advising stressed by the administration and felt by the faculty. It should be noted that only Crown mentioned advising in the Santa Cruz catalogue.

A serious problem is providing advisors with too many advisees. For example, over 56% of the Sarah Lawrence faculty with more than fifteen advisees felt this load too large to adequately advise.

Incompatible definition of the advising function is also a significant problem. A multitude of variations in the responsibilities implied in the advising job description were cited by faculty and students. These responsibilities formed a continuum that included performing an administrative function, providing academic information, being a tutor, serving as a personal counselor, and being a friend. The problem occurs, for example, when a student wanting a friend is paired with an advisor who feels he should only perform an administrative function.

Lack of faculty concern was frequently noted by students who said "My advisor is never around." On the other hand, students in large numbers, as indicated by the "uninvolved" column in Chart A1, did not want advising because they felt sufficiently competent to plan their academic program and were satisfied with the result. Were the advising system improved, such students would probably still not participate.

The remaining problems indicated by sample members resulted largely from personal interaction. Poor relationships caused by personality differences were common.

Advising was viewed as far worse in the general education area than in concentration essentially because the department which is the common concern of advisor and advisee in the major is the forte of the faculty advisor. After renovations in general education advising at five sample schools, however, the major advising system, once felt to be superior, was perceived as a dismal failure.

All sample undergraduate advising systems were grossly inadequate. 17% of Brown students unsolicitly said they desired additional academic information, while one out of four Brown students provided the interviewer with misinformation. The problem was worst at Brown because its curriculum offers students the most latitude and least faculty contact.

COMPULSORY ADVISING

The majority of sample schools imposed advising upon students and faculty by requiring student programs and administrative petitions be approved by an advisor. Similarly, Santa Cruz and Reed force the students to consult their advisor to obtain written evaluations and grade reports. The requirement did succeed, according to interviewees, in causing greater student-faculty contact, to a lesser extent in moderating student programs, and for very few in preventing severe mistakes; however, it simultaneously undermined the advising system. Advising by virtue of its required administrative role was routinized and transformed into an entirely administrative structure. The traditional picture of students contacting their advisor five minutes before semester programs are due to obtain the advisor's signature and of students going to their advisor with a problem only to have the advisor reach for a pen and ask what has to be signed were commonly described. Abuses were frequently noted as well. A few students indicated forging their advisor's signature while a small number of faculty gave their secretaries authorization to sign student program cards. On the other hand, a relatively small number of students said that only because of the compulsory consultations had they met their advisor and subsequently fostered a very good relationship.

STUDENT ADVISORS

Brown and Justin Morrill Colleges (JMC) both supplement the faculty advising structure with student advisors. At JMC lower class advising is performed primarily by upperclassmen chosen by a student-faculty board. Student advisors are salaried, receiving one dollar and sixty-five cents to one dollar and seventy-five cents an hour for at least ten hours per week. It should be realized that a salaried program employing only ten advisors would cost at least seven thousand dollars a year.

The student advisors interviewed thought the program was successful, feeling they were able to give students information faculty members could or would not provide. The only limitation mentioned by advisors was they could not make "top level decisions," i.e., making program exceptions.

The program was very successful for the advisees as well; only scattered criticism was offered by the students interviewed. Offices are set aside for student advising which makes advisors readily available. However, students frequently indicated that they did not care to use the advising system.

At Brown advising by students does not occupy as central a role in the freshman and sophomore advising program. It is clearly a supplement to advising rather than the alternative offered by JMC. Advisors, all non-salaried members of the student government sponsored Meikeljohn Society, advise individually assigned freshmen. Students felt Meikeljohn advising very positive; assets similar those cited at JMC were mentioned by Brown students, Meikeljohn advising provided them with information not available from faculty and with one exception, very accessible advisors.

FRESHMAN SEMINARS

At Trinity, Haverford, and Sarah Lawrence College, the student's freshman advisor is his freshman seminar instructor. The freshman seminar is, briefly, a small class limited to freshmen conducted with a seminar format and based upon a topic of mutual interest to students and faculty (see general education). Sarah Lawrence is not discussed in this section since its faculty commitment differs markedly from that of the other sample schools, making it difficult to assess the undiluted impact of the seminars upon the advising system.

At Trinity the employment of freshman seminar instructors as advisors to the members of their seminars has represented an improvement in advising for both students and faculty. 76% of the faculty found the advising system favorable as did 46% of the students, who felt they had established an excellent advising relationship. On the other hand, 38% of the students felt they had formed no relationship with their advisor; 15% attributed the failure to their lack of interest in using advising while only 8% felt their advisors at fault. 35% of the faculty thought that discourse with students was easier as a result of the advising change; however, most faculty were unsure whether students consulted them more or less often. 31% of the students praised the advising system for permitting them to meet a faculty member. The Trinity findings are corroborated by the 1968-69 and 1969-70 annual freshman seminar evaluation reports by program director (1968-70) Richard Lee.

The Haverford faculty were enthusiastic while Haverford students merely positive regarding the advising function of the seminar. However, it was felt that advising was still in need of improvement. Several sample members mentioned the variety in faculty ideas regarding what duties an advisor should perform and the generally deficient faculty background regarding the college and curriculum. One faculty member characterized first year faculty serving as seminar leaders as utter failures.

Teaching in a freshman seminar was greeted no more positively by faculty than participating as an advisor. For taking part in seminars faculty frequently receive only a comparable reduction in course load. Even when the course load is reduced, no real incentive is provided since participation in department affairs would be more profitable in terms of future salary and advancement. As a result, faculty attitudes toward advising were still poor, but more importantly, faculty were still unable to give students information outside their department. This is shown in a study by Amy Yatzken, Class of '74, of 292 freshmen in the 1970-71 Trinity program.

"Do you feel that, as a result of your contact with your freshman seminar instructor, you have an adequte amount of information about Trinity's curriculum, in order to use the resources of the College to your best educational advantage?"

YES-42%
NO -56%

FRESHMAN INQUIRY

In 1971, Haverford College introduced a group advising session occuring at the end of the freshman year, called the Freshman Inquiry. The Inquiry makes mandatory the multi-faculty-student consultations noted earlier at several of the smaller, more informal sample schools.

Freshmen are required to prepare a 1500 word essay for the Inquiry on "their current intellectual position and a justified plan for their future course of study." 11% of the faculty and 22% of the students felt the essay a chief strength of the Inquiry. Each student meets with a board consisting of a faculty member from each division (including the students pre-major advisor) and a senior. The board is charged with the resonsibility of suggesting changes in the student's plans, approving his plans, or requiring the student to repeat the Inquiry. Written copies of the board's assessment are filed with the student's advisor and the Registrar, though not as part of the student's college record.

The first Freshman Inquiry, for members of the class of '74 and designated members of the class of '73 took place on a Friday and Saturday in April, 1971. 73% of the participating faculty interviewed were positive, 17% neutral, and 11% negative, and 74% of the participating students interviewed were positive, 20% neutral, and 7% negative. In addition, 72% of the participating seniors were positive, while the remaining 28% felt the Inquiry "questionable."

The most positive feature, noted by one-third of the freshmen and 28% of the seniors, was the opportunity to meet new faculty and receive additional advice. Similarly, two-thirds of the faculty felt the Inquiry was a helpful extension of advising. Other strengths cited by faculty included, additional advising contact (22%), the opportunity to learn by watching one's advisees react with other faculty (15%), and the providing of a wide spectrum of advice for students (11%).

Success, however, depended heavily upon the specific panel and the individual before the committee.

Although faculty said the Inquiry preparation required little time, only 17% of the faculty sample said the amount of time required by the Inquiry itself was not burdensome. 20% characterized the sessions as very tiring, and one student even felt his Inquiry had failed because the panel was so tired. However, 11% of the faculty felt the Inquiry would be more valuable in the sophomore year, feeling freshmen too young and unable to profit from major advising at that point.

Initiation of such a program at universities with larger student-faculty ratios may be impossible if it requires increasing each committee's student load, since even Haverford's two-day Inquiry was described as exhausting. Lengthening the duration of the Inquiry would increase expenses by eating into course time, which is not to say such a sacrifice would not be worthwhile.

In establishing an inquiry, the program must be clearly defined to the understanding of all students, faculty, and administrators before it is adopted. A high degree of anxiety was noted by many Haverford students and faculty, attributable to a lack of adequate information and the prevalence of rumors. Utilization of a trial shake-down period prior to the wholesale adoption of such a program is desirable. Haverford undertook a series of public trial inquiries in 1969-70, and, on the bases of the inadequacies in the sessions, changed the nature of the inquiry significantly.

Though receiving by far the most positive response of all advising mechanisms discussed, and incurring the least expense, the Inquiry has strict limitations. The most obvious problem is that the session is a "one-shot deal." After a student's hour before the board, the feedback from the group is over, although a few students indicated that they planned to maintain contact with board members other than their advisor.

GENERAL EDUCATION

CORE COURSES

The core course, as considered in this study, is the common, broad, interdisciplinary survey required of all students. Core courses were studied at Columbia, Reed, Santa Cruz, (Stevenson and Cowell), and Florida Presbyterian. There are traditionally three structural prototypes for core courses--common lecture, common lecture combined with a section, and sections alone. The typical common lecture consists of one or more faculty lecturing to a large class either presenting, in the case of the lone instructor, the individual's view of the core area or, in the case of the multi-faculty staffed lecture, a view of the core area usually emphasizing the lecturer's departmental orientation. No course of this type was found in any of the sample schools.

The lone lecturer, or "great man" approach was far more popular in the period following World War II than it is today. The reason for the decline is the difficulty involved in finding an instructor who knows the entire area encompassed within the core, and is willing to teach the core year after year. The first year Cowell College course is taught by a single lecturer. In the earliest years of the program, the "Western Civilization" course was taught by a dynamic instructor who treated western civilization as his specialty. During this period 64% of the students had positive reactions regarding the course (the most positive student response noted); however, after the instructor left, 87% of the faculty indicated negative feelings regarding the core because of the new instructor, while those who had taught in previous years had been enthusiastic about their experience. Similarly, the faculty indicated that the students were very unhappy with the new instructor, and were taking the course only because it was required. These students who were still early in their college careers were not included in the study. The picture that emerges is a course totally dependent in quality upon the lecturer, almost to the exclusion of structure, materials, or other components used.

The faculty team taught lecture suffers commonly from a lack of cohesion. In this format faculty from several divisions are brought into the course to give a small number of lectures. At two of the three schools employing this, it was roundly criticized. Twenty-two percent of the Florida Presbyterian students characterized the team taught lecture as a chief weakness of the program, while 69% of Reed's students rated the lectures

	COLUMBIA	REED	STEVENSON	COWELL	FLORIDA PRESBYTERIAN
TITLE	Contemporary Civilization	Introduction to Modern Humanities	Culture and Society	World Civilization	Core Program
Common Lecture	No	Yes-Team Taught	Yes-Team Taught	Yes-great man	Yes-team taught
Sections	Yes	Yes	Yes	Yes	Yes
Format	1 year required 4 credit courses/term equivalent to 11/3 courses meeting 2X a week for 2 hours or 4X a week for 1 hour.	1st year required 2nd optional equivalent to 1-1/2 courses 2-3 lectures per week and a weekly seminar.	1/4 required equivalent to 1 course varying number of lectures and seminars. Meets U.C.S.C. social science requirement.	6 quarters required equivalent to 1 course/term, varying number of lecturer and seminars: Satisfies U.C.S.C. Social Science, Humanities, and occasionally Science requirements.	4 years required equivalent to 1 course/term. Frmn and Soph common movies and lectures, seminar in varying numbers. Accounting for 6 hours/week. Jr. 4 hours/week of lectures, discussion, workshop and presentation. Sr. a weekly lecture and at least 1 discussion section
Subject Matter	Fall Term Secular state and reformation A new science and its epistemology; Absolutism and constitutionalism. Spring term Enlightenment; French Revolution; Industrial Revolution; Reflections on Change.	FIRST YEAR Selective study of development of civilization and culture in ancient Greece and Western Europe. SECOND YEAR Development of Modern European society and culture from 18th to 20th century.	Topic varying on theme of individual and society. 1970-71 was examination of university in society.	Freshmen-Western Civilization. Fall-Homeric Greece Imperial Rome Winter-Medieval Consciousness and Culture Spring-Renaissance Consciousness and Culture Sophomore Fall-American Winter-NonEuropean Spring-Contemporary Problems	1 year-Western Civilization 2 year-Western Civilization 3 year-area study Asia, E. Asia, Latin America, African, Soviety 4 year- Christian Faith,
Who Enrolls	All Freshmen	All Freshmen and Sophomores electing a second year.	All 1st 1/4 Freshmen	All freshmen and sophomores	All Students
Who Teaches	Largely graduate students. A few junior faculty 2 senior faculty including the director.	Faculty: Many different faculty lecturers and faculty seminar leaders.	Faculty: Multifaculty lecturers-Faculty seminar leaders.	Faculty: Single lecturer. Faculty: Seminar leaders.	Faculty: Students other than freshmen choose their seminar leaders. Most faculty participate. Individual to Multifaculty.

	COLUMBIA	REED	STEVENSON	COWELL	FLORIDA PRESBYTERIAN
Incentive for Teaching	Theoretically though not in practice.	No	No	No	No
Source of Faculty	Five Departments	A few Departments	All of Stevenson.	All of Cowell	All Florida Presbyterian Faculty
Opinion	Faculty General University (-) Participating Staff (+) Students(-) highly	Faculty 50%(+) 50%(-) Students 51.5%(+) 48.5%(-)	Faculty 87.5%(-) 12.5%(+) Students 40%(+) 60%(-)	Faculty 70%(-)30%(+) Students 64%(+) 24.4%(-) 6.7%(0) Most faculty did not teach at the same time students took the course. A change of lecturer occurred in the interim.	Faculty 100%(+) Many used theoretical rather than practical decisions.

poor. A majority of participating faculty indicated that they attended none or few of the other faculty lectures. The larger the group of participating faculty, the greater the difficulty in integrating lectures. The more faculty participating, the less the amount of time any individual must put into the course and the greater the feeling of uninvolvement with the program. As a result, there is less faculty willingness to give time to organize the program. Furthermore, since faculty do not receive release time or recognition for giving their one or two lectures, core lecturing becomes a chore. As a result, it is common for faculty members, as indicated by at least 13% of the Florida Presbyterian sample, to employ the same lecture year after year, despite changes in the core. Similarly, several faculty indicated that they were not used to working with other faculty members. In addition, many faculty said they could not coordinate their lectures with those in other fields due to their high degree of specialization. Justin Morrill abandoned a common lecture in its "Inquiry in Expression" program after one year due to the problems mentioned, specifically difficulty in briefing lecturers about the program, the imposition in sponging lecturer's time, and difficulty in continually obtaining lecturers.

The lecture-section model adds a small group meeting to the common lecture, much like the addition of a side car to a motorcycle with the essential difference that the side car follows the motorcycle. Reed, Stevenson, Cowell, and Florida Presbyterian College have this type of course.

At Columbia, the most professional of the core sample schools where 57% of the faculty indicated that they had been made to teach in the program, participating faculty are encouraged to leave the core program as quickly as possible, both by the large amount of work involved in core teaching and the need to get back to the department, causing a high turnover rate in core programs. A study of the Columbia Contemporary Civilization (CC) staff from 1935-1961, omitting the war years, showed that at no time did the course have more than four faculty who had participated for more than five years. As far back as 1938, there was only one faculty member with more than four years experience. In all of the years analyzed except three, more than 50% of the faculty teaching were new. Columbia uses a system that rewards faculty after three years of service but, as the Program Director said, "This doesn't encourage people to come to the program, but rather to stay a third year if they had already taught two years." At Reed however, 20% of the faculty sample said that the Core was a real consideration in tenure and rehiring decisions. It is important to note that 50% of Reed's faculty and 52% of its students indicated positive Core experiences, which is relatively high for the sample schools.

Florida Presbyterian has mitigated this situation to a small degree by making the four year Core a central part of the curriculum. Accordingly, the necessity to participate in Core is an obligation explained to all prospective faculty. Professors are expected to participate two out of every three years. The Florida Presbyterian Core was originally conceived as a way of creating a more cohesive faculty, with at least broad backgrounds, if not interdisciplinary tendencies. Faculty participation has been excellent, with 100% of the interdisciplinary staff, over 50% of the humanities staff, over 60% of the social science staff, and over 30% of the natural science staff taking part during 1970-71. Nonetheless, one-third of the Florida Presbyterian faculty sample indicated that some faculty did not take the Core seriously, were unwilling to participate in Core teaching, thought the Core was a waste of their time, or simply put no time into the course.

At each of the schools using a lecture-section format, there was sharp criticism, especially by students, of the lack of cohesion between lectures and sections. The discontinuity, which is most apparent between different sections, arises from the narrow groundings of the participating faculty. Many, if not most, faculty relied upon their "discipline" for the orientation of their section. Faculty readily admitted to emphasizing the materials they knew and glossing over those which were alien. As a result, the Core courses were equivalent to the Core area as viewed from the instructor's discipline. Florida Presbyterian realized this situation was inevitable, and in 1971-72 began permitting students to choose their section leaders. In addition, Florida Presbyterian, Reed, and Columbia held regular staff meetings to insure that some level of cohesion within the program is maintained. These meetings are employed to discuss the course material and general course policy. Attendance at such Core meetings, however, was usually poor.

The body of new material encompassed in the Core makes the sections very difficult to prepare for the first year faculty, as indicated by a large portion of the faculty sample. One section leader at Columbia reported spending as much as eighty hours a week in preparation for his first section. Similarly, a number of faculty indicated that in their first year they were really lost because of the overwhelming amount of new material. Science faculty at Florida Presbyterian felt especially helpless in this situation.

The section format is very costly especially when section leaders are faculty, as in four of the five sample programs. In each program, the Core course counts as a regular part of the faculty member's load so that there is a loss of one course for each section mounted. Since sections are intended as discussion groups they are small, necessitating a net loss of student enrollments in each section period. This high cost was one of the reasons Bard College abandoned its Core.

Columbia reduced the cost by employing graduate students instead of faculty. The C.C. course load has traditionally been so heavy at Columbia that C.C. graduate instructors have had a poor record of dissertation completions. In addition, according to the Columbia student course evaluation, the C.C. graduate instructors rated below the Columbia University norm in clarity, speaking style, and lecture interst, although they did rank high in instructor ranking.

The individual section method motorizes the side car andabandons the motorcycle. Columbia's C.C. program operates in this manner. The commonality of the lectures is transferred to a commonality of materials studied in the sections. A common list of readings is prepared for the course and each instructor must select at least two of the works on the list for each of the Contemporary Civilization topics, in addition to any other reading desired. Readings are supplemented by mimeographed selections used uniformly through the course. Time allocated to each topic is the same throughout the course. This method, however, sacrifices the commonality of learning once used to bring the freshman class together. The sections are very diverse since the participating faculty are drawn from different departments. One instructor likened the sections to introductory courses from the five departments.

Faculty commonly complained that the Cores did not include the natural sciences. Florida Presbyterian began to offer environmental studies Core courses in 1971-72. Most faculty, whether positive or negative to the idea of a Core, admitted that they had learned an enormous amount through participating. The word "broadening" was most commonly applied by faculty and students alike. Many faculty indicated that they had obtained much more than their students had.

Many students and faculty, as much as 57% at Reed, characterized the Core as too ambitious, indicating that the reading was so voluminous that only a superficial treatment of the material was possible. Groups of two or three students regularly criticized the Core for repeating high school work and small numbers of faculty at each school complained of low morale. Students criticized the required nature of Core courses at three schools because of the incoherence between lectures and sections or because the course was felt to be unsuccessful. No more than a few individuals criticized the Core simply for being required.

Frequent change in the Core was felt to be a problem by faculty and students alike. Faculty, as much as 22% at Florida Presbyterian where change was most common, criticized the constant change for making it impossible to get a handle on the Core. One faculty member echoed the group sentiments in saying, "It is always like preparing a new course," which is, as indicated, hard in the Core programs. Students criticized the Core for its effect upon faculty and for the uncertainty as to what would be studied in the Core.

Interest in Cores commonly revives with the creation of new colleges. Prescott College and New College both began with required Cores and both programs utterly collapsed due to the difficulties in integrating disciplines and organizing, the increased faculty time consumed, and the lack of student interest. Bard attempted a voluntary Core in 1970-71 but this was abandoned for the same reasons as the others, as well as the large expense in using so much faculty time.

Similarly, three of the five Core sample schools have undergone reduction in requirements. Reed and Columbia originally had two year required programs. Reed made the second year optional while Columbia turned the second year over to the departments providing the Core faculty. Most of the second year courses soon became departmental introductions required for majors by the sponsoring department, and in 1970 the second year requirement was eliminated. Stevenson College originally required a three quarter Core, but this requirement was quickly reduced to one-quarter.

SUMMARY - A SCENARIO FOR THE DEATH OF A TWO YEAR CORE COURSE

1. Lectures led by Great Man.

2. Great Man leaves--succession of lesser Great Men tried with little success.

3. Sections introduced to supplement lecture.

4. Faculty team brought in to teach lectures.

5. Original enthusiastic faculty leaves the program.

6. Unwilling faculty are drafted--morale is poor.

7. Big turnover rate--faculty never get a handle on material.

8. Course quality poor--inconsistency between lectures and sections; section quality poor; Student and faculty dissatisfaction.

9. Changes in second year program with ultimate elimination of second year requirement.

10. Attempts to buttress first year program.

11. Buttressing does little to effect major problems; continued student and faculty dissatisfaction.

12. Elimination of Core lectures owing to faculty inability to collaborate.

13. Cut back in number of faculty required from departments.

14. Requiem.

CORE DISTRIBUTION PROGRAMS

Core distribution programs, as examined in this report, are programs consisting of heavily prescribed and student selected courses created for general education purposes, theoretically with a built-in level of coherence as opposed to smorgasbord distribution programs. Such programs were examined at Residential College, University of Michigan and Justin Morrill College of Michigan State University.

Faculty and students at both colleges were unhappy with their Cores--70% of the Residential College and 62% of Justin Morrill faculty wanted large Core changes, while 38% of the Justin Morrill students and more than half of the Residential College students expressed dissatisfaction with the Core. Many more students, however, expressed

	UNIVERSITY OF CALIFORNIA SANTA CRUZ	BARD	PRESCOTT	JUSTIN MORRILL COLLEGE
GENERAL EDUCATION REQUIRE-MENTS	3 courses in each of 3 divisions	Lower-class years 1 of 2 designated English courses. Upper-class Years 2nd course in each division.	2 courses in each of 4 divisions	Humanities No credits in 4 of the following areas-History, Religion, Philosophy, Fine Arts, and Interdisciplinary Humanities. Social Science 20 credits from Politics, Psychology, Sociology, Economics, Anthropology, Interdisciplinary Social Science,--No more than two courses or two credits in one area. Natural Science ([illegible] credits) including 3 JMC courses and any of a smorgasbord of choices with as many as two Michigan State courses. Foreign Language 2 year proficiency through JMC intensive or Michigan State courses. Inquiry of Expression (12 credits) 3 of 4 1-Expository Writing 2-Expository Writing 2 3-Individual Writing 4-Experiments in Aesthetics Field, Foreign or Independent Study (12 credits in one time block) Senior Seminar 5 credits

(Continued)

	SARAH LAWRENCE COLLEGE	ANTIOCH	UNIVERSITY OF MICHIGAN RESIDENTIAL COLLEGE
GENERAL EDUCATION REQUIREMENTS	No distribution. Limitation of 1 course/ departmental term during the first 2 years	1-3 years (Level 1) 2 courses in each of Arts and Humanities, Physical Science, and Social Science. Physical Education (16 credits) Math and English Skills Exam--Level 1 Exam 1-5 Years 2 courses in each division. Level 2 achievement exam.	Freshman Seminar (1st Term) Foreign language through reading level. 3 Natural Science courses 2 in one department Logic and Language (may be counted as a science course 3 social science 2 in one department 3 Humanities 2 in one department

milder degrees of dissatisfaction.

Majorities at both schools thought the Core a central part of the curriculum which should be required, but felt wide flexibility of course selection and sequence was necessary.

The material describing student and faculty attitudes toward the Residential College Core is derived from reports by Bill Moore, entitled "Student Comments on Core curriculum at Residential College, 1969-70 based upon interviews with one hundred students, 20% of the student body; and John Francis, entitled "Reactions of the Residential College faculty to the College, Students, and the Core Curriculum" based upon interviews conducted with forty-three members of the Residential College staff and faculty.

At the Residential College, student dissatisfaction hinged upon the lack of quality within the Core courses and the fact that the courses were required. More than two-thirds of the students felt the Core met poorly the objectives of providing a broad foundation in the liberal arts, permitting broad student exposure to a variety of areas, and developing intellectual skills, self-directed learning, and a sense of intellectual community.

Half of the students specifically stressed the need for more alternatives and options within the Core. The need for a better organized program was also cited by many students. Criticisms were directed at the interdisciplinary Core courses for the lack of integration, vagueness, and generality. Foreign language requirements were viewed as too extensive. Freshmen seminars were heavily praised, while required English courses were criticized highly. Slightly more than half of the students felt there was little coordination between Core courses, indicating a need for better communication among faculty.

Students frequently recommended inclusion of more math and science as well as non-western studies and the performing arts. The language requirement was specifically suggested for deletion.

Less than 15% of the faculty at the Residential College felt the Core specifically met their philosophic objectives. Faculty generally agreed that increased flexibility was desirable, as well as echoing the specific changes requested by students, although elimination of the language requirement was controversial.

The Justin Morrill College students and faculty reacted similarly to their Core and distribution requirements. While it should be noted that the Associate Dean of Justin Morrill felt the recorded responses were somewhat unreliable because they were obtained through random, rather than selective sampling, 20% of the Justin Morrill students and 63% of the faculty samples felt that the requirements should be reduced.

Since the completion of this study, both Justin Morrill and the Residential College have reduced their requirements while still maintaining the Core concept.

The process of change in Core distribution programs is partially illustrated by the following description of change at Florida Presbyterian College, although the Core course there remained intact throughout:

Academic curricular requirements, 1960-61
    Number of courses required to graduate-39
    Core-4 years
    Language-3 year proficiency
    Mathematics-1 year
    Science-1 year
    Social Science-1 year
    World Literature-1 year

Changes put into effect in 1962-63
    Number of courses required to graduate-36
    Core-4 years
    Language-3 year proficiency
    Mathematics/Logic-1 year
    Science-1 year

Changes put into effect in 1966-67
    Core-4 years
    Core Science-2 years
    Language-3 year proficiency
    Mathematics/Logic-1 year

Changes put into effect in 1968-69
    Number of courses required to graduate-32
    Core-4 years
    Language-3 year proficiency

Changes put into effect 1971-72
    Core-4 years

Of all distribution requirements, foreign languages have undergone the least change due largely to the existence of large departments with tenured professors and the fear that student enrollment will slip sharply. Such fears were not realized at Brown where language faculty subsequent to the requirement elimination expanded their undergraduate program to include large numbers of offerings in the university freshman seminar program and underclass courses of literature in translation. However, Trinity College had mixed results with a sharp decrease in enrollments during the first year after the elimination of the requirement and subsequent small increases in all language departments except French and Greek which continued to decrease and Russian which increased enrollments the first year and maintained this level the second.

DISTRIBUTION REQUIREMENTS

The distribution programs at Antioch, Bard, Prescott, Sarah Lawrence, and Santa Cruz can be considered together. Unlike the Residential College and Justin Morrill Core distributions, these programs specify no specific courses, but rather require areas of study.

Student reaction to these programs was largely indifference. No more than 11% of the students at any school (Antioch) felt the distribution forced them to take courses they ordinarily would not have. On the other hand, students praised the quality of the liberal arts experience achieved.

Faculty viewed the distribution by comparison with their own general education philosophies rather than through their experience with the program. As a result, equal numbers characterized the porridge as too cold, too hot, and just right. Faculty replies gave little insight into the actual workings of a distribution program.

Stevenson College at the University of California, Santa Cruz, had completed the only study among sample schools, of the distribution of graduated students. The following exerpt is taken from "Some Comments on the Analysis of Course Work Taken by Stevenson College Graduates":

Average Number of Courses Taken in Division of

	HUMANITIES	HUMANITIES LESS LANGUAGES	NATURAL SCIENCE	SOCIAL SCIENCE
Majors				
HUMANITIES			2.71	6.85
NATURAL SCIENCE	10.8	7.5		5.08
SOCIAL SCIENCE	12.65	10.03	3.78	

(Three courses from each division are required of non-majors.)

"If the intention of the campus-wide breadth requirements in Humanities, Natural Sciences, and Social Sciences, is merely to ensure that every student is exposed to at least three courses in each area, then the experience of Stevenson's four year graduates in 1969-70 would seem to indicate that:

> No regulation is needed to ensure the objective except in the case of students majoring in Humanities and Social Sciences, who are unlikely to take three courses in Natural Sciences voluntarily." (From "Some Comments on the Analysis of Course Work Taken By Stevenson College Graduates")

This result is consistent with interviews conducted among Sarah Lawrence College students in which 50% said they did not plan to take natural science courses.

It should also be noted that students are placing a heavy emphasis upon major division at Santa Cruz with Humanities concentrators taking 73% of their courses in Humanities. Filling in the distribution chart to include concentration area produces the following results:

Average Number of Courses Taken in Division Of

Majors	HUMANITIES	HUMANITIES LESS LANGUAGE	NATURAL SCIENCE	SOCIAL SCIENCE
HUMANITIES	26.44			
NATURAL SCIENCE			20.12	
SOCIAL SCIENCE				19.57

GUIDELINES

A series of voluntary requirements are prescribed for students at Trinity and Haverford, mirroring the typical distribution program.

Students at both schools had no interest in the guidelines. Only 7% of the Haverford sample, and 2% of the Trinity sample indicated using the guidelines at all. Haverford supplements the guidelines with a freshman group advising session, called Freshman Inquiry, about which students were very positive and generally satisfied with the level of personal feedback provided. Inquiry was considered far more valuable than the guidelines. (See Advising)

A majority of students at both schools indicated distributing themselves well over the entire curriculum. Others noted omission of one or more areas, commonly including the natural sciences. A number of Trinity students indicated attending Trinity because it had no requirements.

Eighteen percent of the Trinity sample and 5% of the Haverford sample, consisting of only freshmen and sophomores, said they were not distributing because they were already doing major work. The major, particularly at Trinity, serves as a clear demarcation point--most students having a major are no longer distributing their courses, while those students who are still uncertain about a major distribute because it is the way to find a major. It is likely, based upon interview resonses, that students are spending less time on distribution and more time upon the major than in the past--however, it is still too early to examine the difference in distribution patterns occurring before and after the initiation of guidelines.

Although the failure of guidelines as a method for encouraging a pattern of student distribution is clear, it is not clear what effect the resulting free elective system has upon undergraduate education. Some insight is gained from a study of free electives at New College.

NO REQUIREMENTS

In 1968-69, all distributional requirements at New College were eliminated. Students and faculty, with rare exception, were satisfied with the resulting free elective system.

A study of diversification for 1969-70 produced the following result:

PERCENT OF STUDENT WORK IN THE THREE NEW COLLEGE DIVISIONS, 1969-70

NO WORK IN A DIVISION

Humanities--6.1%
Social Science--37%
Natural Science--57%

75% OR MORE WORK IN ONE DIVISION

Humanities--35%
Social Science--8%
Natural Science--9.4%

90% OR MORE WORK IN ONE DIVISION

Humanities--24%
Social Science--3.2%
Natural Science--2%

This study is severely deficient in that it is a "one-shot" examination of all student distributions for one year. A redeeming feature is the lack of inconsistency with the Santa Cruz study cited in the 'Distribution' section and student interviews. A study of the distribution of graduated students over a period of several years would be most desirable. Nonetheless, gross results of the study are very clear. A very poor level of distribution is apparent with a pronounced tendency by most non-scientists not to take science courses and by a very sizeable minority of humanities students to take little more than humanities. Students interviewed at Brown, where there is no distribution requirement, too indicated an unwillingness to enroll in science courses.

FRESHMAN SEMINARS

Freshman Seminar Programs were studied at Brown, Harvard, Haverford, Sarah Lawrence, Stanford, and Trinity.

Faculty and student opinion of the seminars in which they participated was generally positive. At least 69% of the faculty at the four schools where opinion was successfully gauged were positive regarding seminars in which they had participated. At Trinity and Haverford, the other two schools, seminars were highly praised by faculty as well. Between a plurality and a majority of students were positive regarding the seminar courses. Overall student response was as negative as it was for two reasons: Particularly at Sarah Lawrence College, the chief needs fulfilled by the seminars at other colleges were not present; and because the seminars were oversold.

The chief strength of the program indicated by students was the opportunity to work with, and know a professor during the freshman year. Students also praised the program for providing a social context for meeting other freshmen and for the seminars' small size. The degree to which small size was mentioned was inversely proportional to the smallness of the student's other courses, so that this attribute was cited most frequently at Harvard and least at Sarah

	BROWN	HARVARD	HAVERFORD	SARAH LAWRENCE	STAMFORD	TRINITY
Distribution of Courses	41 Humanities 24 Science 10 Social Science 70-71 22 Humanities 21 Science 4 Social Science	Unimportant since enrollment not required.	Humanities-35 Social Science-11 Science-8	One in each "Department," though Sarah Lawrence has no departments.	Not important since enrollment not required.	Science-10 Social Science-13 None in Political Science 6 in History Humanities-12 None in Fine Arts Phys. Ed. - 1
Opinion	Students 50%(+) 39.2%(-) 10%(0) Faculty 90%(+) 10%(-)	Students 8%(-) 24%(0) 68%(+) Faculty 93.5%(+) 6.5%(-)	Students 83.5%(+) 3.3%(0) 13.2%(-) Faculty Highly favorable	Students 62.5%(+) 27.3%(-) 10.2%(0) Faculty 69.1%(+) 7.2%(-) 23.2%(0)	Students 40%(+) 34%(0) 26%(-) Faculty 92.5%(+) 7.5%(-)	Students 42.9%(+) 27.6%(0) 28.6%(-) Faculty Unclear Generally Favorable

Lawrence. Similarly at Sarah Lawrence, the smallest and most inner-directed of the schools, the social context was not mentioned.

No more than 60% of the students at any school felt the freshman seminar program especially appropriate to freshmen. A significant number, often equal in size to the group feeling seminars appropriate for freshman year, thought seminars useful during any year, while only a very small number said the seminar was inappropriate for freshmen, generally feeling they could make better use of it later.

Faculty praised seminars primarily for serving as a change of pace. Faculty almost uniformly perceived the seminars as different from regular courses for a variety of reasons--most often for permitting flexibility. This different perception of the seminar among faculty was manifest in positive and negative results. Positively, many faculty used the course as a laboratory for experimentation with new instruction format. Several indicated bringing new teaching methods derived in their seminars back to their departmental classrooms. Negatively, inability to successfully apply the teaching method perceived as necessary disturbed many faculty, in a few cases, causing observable disquiet. Additional experience with the seminar will be necessary for some faculty to gain a handle on the program.

What is essential to understand about the freshman seminar is that there is no level of coherence within the program. All that seminars have in common is a course limit and certain inbult structures, such as advising, or at Haverford, a common meeting time to avoid student selections upon time criteria, or at Stanford, the common practice of meeting in the professor's home.

Course meetings were generally of two types--meeting once a week for a large block of time, or meeting a number of times a week for shorter duration, though at Harvard it was common in the smallest seminars for a professor to open himself and his research facilities to seminar members as the students desired. Only at Trinity did any number of students express a preference for any time format, favoring multiple short meetings.

Other than these givens, the seminar format was completely at the discretion of the instructor. As a result, the liabilities and assets attributed to the individual seminars were those which would be ascribed to any course such that few comments were generally applicable to any program as a whole. However, four significant problems were mentioned in all or most of the programs: gearing the course above the freshman level; using the seminar as a lecture; attempting to be "relevant" to the extent that the course lacked content; and inability of freshmen to participate fully as a result of shyness.

A different type of format, an open seminar, was attempted at several schools, notably Trinity where the practice was institutionalized. Open seminars are those with no prearranged topic, rather the students and faculty member together structure the course substance. All but one of the faculty in the Trinity sample who had taught open seminars (8) exprssed a desire to structure their seminars next time. Most indicated having to increasingly structure their seminars throughout the semester because "the students wanted me to do it." A few faculty said a length of time was necessary for the class to choose a topic for the course. One explained that his class chose a topic three weeks into the term only after he had scolded them. At this point, it becomes difficult to obtain course readings without additional time loss. The majority of faculty at other schools leading open semesters reported the same problems.

Three different enrollment patterns existed in the six programs: required seminar programs--Sarah Lawrence, Haverford; recommended non-required program--Trinity, Brown; and supplementary program for selected freshmen--Stanford and Harvard. The required and recommended programs utilize the seminar as the core of the general education program; none of these four colleges impose additional general education requirements though Trinity and Haverford have voluntary general education guidelines.

Three of these four programs, Brown excluded, use the seminar leader as the student's advisor.

In the recommended programs, an attempt was made by Trinity and Brown administrations to publicize the programs to obtain high freshman enrollments. In both instances, the effect was an over-selling of the program; that is attributing excessive virtues to the seminars. Many freshmen at Brown noted that orientation materials were especially deceptive while the 1970-71 "Evaluation of the Trinity Freshman Seminar Program" by Director Borden Painter recommended not "overselling" the program. As a result, the seminars at those two schools were viewed as least successful by their students.

The supplementary seminars, more at Harvard than Stanford, serve as an addendum to the freshman program, rather than the central feature of the general education program as at other schools. Both Stanford and Harvard have required distributions for general education purposes. At Stanford, the seminars have only been oversubscribed for the past two years, though initiated in 1965, and attempts are being made to increase the number of seminars, as noted by the accommodation of 300 more students in 1970-71 than in 1969-70.

Only at Brown were students other than freshmen admitted into the seminars. Sophomores were permitted enrollment only after freshmen had completed registration. The Registrar indicated that only a very small number of sophomores had registered, so their impact upon the program was negligible. At four of the six colleges, faculty members (Brown-20%, Trinity 24%, Sarah Lawrence-7%, Stanford-18%) said that freshmen were unable to utilize the seminar adequately, because they did not talk in class. Several faculty suggested either screening freshmen for seminars or permitting upperclass enrollments. At Trinity, Brown, and particularly Stanford, freshman seminars are currently insufficient in number and/or topic distributions to adequately handle the freshman class, with no immediate possibility of change. Regular admission of upperclassmen would only exacerbate the situation. Furthermore, the important function cited by students, of providing a social context for meeting other freshmen, would necessarily be altered.

Trinity occasionally uses undergraduate teaching assistants in seminars. In 1970-71, eight participated. The program director and the two faculty interviewed at Trinity who had worked with the T.A.s indicated that these students cut down the distance between faculty and freshmen. At Brown, one faculty member used two undergraduate T.A.s with the same result. In the Trinity study by Amy Yatzkin '73 of 292 students enrolled in seminars during Fall, '70 (of the 404 freshmen enrolled in seminars), 80% of the freshmen from sections utilizing T.A.s found the upperclassmen played a helpful role as contrasted with 21% who disagreed. (One fourth of Ms. Yatzkin's sample had been in seminars with T.A.s.) One-sixth of the Trinity faculty interviewed felt T.A.s had been so successful that they would employ a T.A. in their next seminar. Graduate T.A.s were not as successful since freshmen perceived them as closer in role to the professor than themselves. In addition, a number of instances of abandonment by a faculty member of a seminar to a graduate assistant were noted at Harvard and Stanford by both the abandoning faculty and the seminar students.

In conclusion, addition of undergraduate teaching assistants might be a useful tool in diminishing freshman shyness manifest in a lack of participation in seminars. Trinity College provided Teaching Assistants with the incentive of one course credit for their participation in the seminar.

Trinity, Harvard, and Stanford sent the entering freshmen a description of the individual seminars during the summer prior to freshman registration. The students at Harvard are permitted unlimited seminar choices, at Stanford five choices, and at Trinity three choices. Trinity and Stanford place the student in one of his choices while Harvard gives the student applications to the individual instructors to choose the desired students. Oversubscription is handled at Harvard by screening and at Stanford largely by random selection. At Haverford and Brown students receive seminar descriptions during orientation, and enrollment is first come-first served during registration. Sarah Lawrence places students in seminars based upon interest areas indicated in addmissions applications.

Each of the selection methods has created serious problems. Placement by student preference has resulted in third choice placements, which in many cases, led to student dissatisfaction. In fact, 15% of all students at Trinity were unable to gain admission to any of their three preferences. The lack of flexibility in the number of seminars has made transfer into different seminars for extremely ill-placed students impossible. The problem is far more serious at Trinity than at Stanford because of the more central position of the seminar in the Trinity freshman curriculum. The first come-first served method again, in view of the lack of seminar options, means that a student who is not among the first to register frequently will be unable to find any seminar of interest. Thirty percent of the Brown freshmen in the sample, who did not take seminars, cited this reason. The process of screening students by the seminar instructors at Harvard has caused great unhappiness and feelings of inadequacies for rejected applicants. Before college even starts a majority of Harvard and Radcliff students have been rejected for a freshman seminar, apparently on their own merit, with several students experiencing premature "identity crisis" despite the fact that most instructors admitted a degree of arbitrariness in their choices. A few professors each year find the selection of students so difficult that they admit a few more than the 15 limit, which is undesirable in terms of small group interaction. In addition, some students are admitted to multiple seminars, necessitating a waiting list since students are permitted attendance of only one seminar. As a result, even a few of the students ultimately admitted to a seminar enter with feelings of second-ratedness.

A subsidiary problem, according to faculty and students, is that students frequently do not know well enough what the seminar will study, how the seminar will operate, or what the instructor is like when enrolling.

It was therefore proposed that the Modes of Thought courses begin one or two weeks after other courses so that students could investigate possible courses more fully before deciding on one. The suggestion that all Modes of Thought courses be deferred until second semester was also brought forward. Deferring seminars to second semester would be deleterious to any advising function of the seminars. On the other hand, instead of beginning classes two weeks late, Haverford and Brown provide occasions for students to meet seminar leaders and discuss their courses during orientation week. Unfortunately, such meetings have been poorly attended by faculty and students. Additional information, however, beyond the one-shot meeting might provide the needed input, such as trial seminars during orientation with seminar instructors, fuller descriptions of seminars and seminar leader expectations, and increased opportunities for prospective students to meet seminar instructors during orientation week. These measures, however, will only work providing they have the cooperation of freshmen and faculty instructors.

The Brown, Harvard, Haverford, Sarah Lawrence, and Trinity programs all rely principally upon college or university faculty, though senior faculty make up a minority of program staffs. Brown obtains additional staff from the graduate student ranks. Five graduate teaching assistants were employed in 1969-70 and nine during 1970-71.

At least 30% of the seminar staff at Stanford were from areas not teaching undergraduates. This method of faculty employment brings to the seminars those faculty with lighter teaching loads, who are more likely to be able to teach freshman seminars without having to drop other course responsibilities. This is an economical way of increasing seminar offerings and providing added perspectives to the program. This use of graduate and professional faculty also provides input at the graduate level as to the condition of undergraduate education. Twenty-three percent of the entire Stanford faculty sample indicated the seminar was their first experience teaching undergraduates and that they were grateful for the experience. The success of these instructors presents many similar possibilities for economical expansion of freshman seminar programs, e.g., use of volunteer retired faculty, community professionals, etc.

According to program administrators at each school, all participating faculty were volunteers. When the number of volunteers were insufficient, an administrative head-hunter was sent to negotiate with departments to free people who wanted to teach. Yet over 20% of the Trinity faculty and others from Brown and Haverford complained about being forced to participate in the program.

A problem of all freshman seminar programs has been faculty disinterest especially in rigidly departmentalized colleges and graduate oriented universities. The Brown Freshman Seminar Committee was forced to use exceptional flexibility in approval of seminar proposals owing to the "disappointingly small number of proposals submitted." In Trinity's 1969-70 Program Evaluation, Director Richard Lee indicated difficulty in "persuading the best men we have to donate a large part of their energy to this kind of teaching" in that "it does not typically increase one's paycheck or professional standing." Trinity's 1970-71 Freshman Seminar Director Borden Painter said departments which provided faculty for the program, in many cases, provided fewer faculty than requested, felt they were doing the program a favor.

In interviews a majority of the non-participants indicated a greater interest in their department or field and lack of interest in the seminar program.

A majority of faculty at Brown echoed the sentiments of a faculty leader who said, "Interdisciplinary programs of any sort, which were encouraged under the new curriculum, receive no help at all or are sabotaged by departments. What you're doing in effect is asking any individual (who participates) to cut off his ties to the life blood of his career."

Brown, Haverford, Sarah Lawrence, and Trinity do not fund their freshman seminar programs. The non-funding creates severe problems in faculty staffing. The distribution of seminars at Brown is therefore badly unbalanced. In 1969-70 Brown had 21 science, 22 humanities, and 4 social science seminars, and in 1970-71, 41 humanities, 24 science, and 10 social science seminars. Haverford had 35 humanities, 11 social science, and 8 science seminars in 1970-71. Another manifestation of staffing difficulties is the inability of programs to provide adequate numbers of seminars. Trinity for instance, was able to mount only 36 of 39 desired seminars.

At Brown the participating departments are the larger ones with the lightest teaching loads, while some smaller departments with heavier loads, provided no freshman seminar faculty. To illustrate the problem more graphically, Engineering and Biology Medical Science, the departments with the greatest numbers of faculty, rated sixth and seventh in the number of undergraduates enrolled; while Sociology/Anthropology and History rated sixth and eleventh in faculty size and second and fourth in the number of undergraduates enrolled. As a result, small departments with heavier teaching loads are unable to release faculty for seminar teaching. A faculty member desiring to teach a seminar must therefore do so in addition to his regular load, though this is even the practice in a number of larger departments. Several individuals at Trinity also taught seminars in addition to their regular load, although the Freshman Seminar Committee at Brown indicated some improvement in this area. Nevertheless, for the junior man, teaching in a seminar means increasing his teaching load, cutting his research time, and ultimately being denied tenure. Aside from the fact that junior people will not participate under these conditions, the impact upon the freshman seminar program would be a lack of continuity since all faculty who participated in the program would be forced to leave the school.

One junior faculty member indicated that he was willing to work under these conditions. He went to his department chairman to ask permission to teach a seminar above his load, but the chairman denied the request, explaining that if the department permitted such activity the administration would expect it in the future.

Regardless of whether departments or individual faculty are granted stipends, it is absolutely necessary to establish a program budget. At Brown, which has no such budget, many faculty complained that their class experiences, equipment, Xeroxing, etc.had to come from their own pockets, research money, or the department's budget. Similarly, at Stanford, which encourages informal meetings at the professor's house, one faculty member complained about having to pay for food and drink for his class each week. The amelioration of this situation would require a comparatively small budget, whose omission can mean the difference between the success and failure of a seminar program since forcing instructors to pay such costs is undoubtedly injurious to staff morale.

Stanford and Harvard do fund their freshman seminar programs, at very high cost. Harvard provides no remuneration for senior participating faculty, while junior faculty are given a decrease in course load for which the program must reimburse the appropriate department. Payments for release time account for $78,000 of the Freshman Seminar Program's $100,000 budget. For the first three years of the Stanford program, the only compensation offered was a graduate assistant for senior faculty and the possibility of release time for junior faculty. Participating graduate students received one-quarter time teaching appointments. Since 1968, provision has been made in the program's $79,000 budget to pay most seminar instructors. It should be noted that Stanford staffs nearly twice as many seminars as Harvard at a lesser cost.

Funding of seminars creates as many problems as not funding, in that it is increasingly difficult to obtain a program faculty willing to participate without funding. Departments are unwilling to let junior people, even with light teaching loads, participate without repayment for their slots. As a result of this financial limitation, Harvard and Stanford are both unable to mount sufficient seminars to accommodate their entire freshman class.

Tufts avoided the funding problem by organizing an ad hoc seminar program. The Experimental College (See Extra-Departmental Curricular Inputs) offers a voluntary program of seminars for freshmen, limited to enrollments of twelve. Upperclassmen are permitted enrollment, as at Brown, after freshman registration, providing seminars are not full. All of the seminars are taught by undergraduates and instructors receive course credit for their participation. The program has been popular as indicated by an April, 1970 report entitled "The Experimental College of Tufts University" by Florence Trefethan--Assistant to the Provost, which said, "Those who have participated, either as students or leaders, usually strongly endorse the Freshman Seminar Program." It was further indicated that the seminar format "fosters confidence and eases discussion." Trefethen concluded that "Peer teaching may have special values in such a setting, exposing the freshman to one teacher who is of his own generation and yet is more experienced and knowledgeable." Limitations in peer teaching are serious, however. Students at Tufts reported putting less work into peer taught courses than faculty led courses. (The limitations are more fully discussed in the in-depth study of the Experimental College in Extra-Departmental Curricular Inputs). The program also offers significant advantages, including a lack of cost for the entire program and accommodations for all interested members of the

Tufts freshman class (approximately 350). However, enrollments and numbers of courses mounted have been somewhat erratic. The major problem, aside from those difficulties found inherent in peer teaching, was that the Tufts program runs contrary to many of the rationales for initiating a freshman seminar program.

SPECIAL GENERAL EDUCATION PROGRAMS

The programs considered in this cluster are the Yale Directed Studies Program, the Berkeley Experimental College Program, and the St. John's four year Great Books Program. All of these programs are similar in that they are intended for a self-selected group of students to utilize a core format consuming all or part of the participant's time. As a result of the self-selection, these programs were generally popular with the participating students and faculty--more universally popular than any other core program discussed.

DIRECTED STUDIES

Directed Studies is a freshman and sophomore general education program admitting only a select group of Yale freshmen. The program is unashamedly elitist and aims to accept only those students who have shown most academic promise.

Students are given the opportunity to apply after acceptance by Yale. Applicants are considered over the summer based upon the same dossier employed in admission to the University. Approximately 220 students apply each year (slightly less than 20% of the freshman class) and between 70 and 95 are admitted, although 75 is the official goal. College Board Scores are the crucial factor in admission to Directed Studies; students with scores below 750 are rarely accepted. Students completing one year have the option of continuing for a second, and about two-thirds of the students do so. The program is run with its own budget.

The Directed Studies courses are specifically designed for the program and are taken only by students enrolled in the program. In the freshman year, they are:

1. Literature I
2. Philosophy I
3. History of Art I
4. History and Politics I
5. Mathematics I
6. Biology I

Students planning to concentrate in the humanities take courses 1-4 with the option of substituting a language course and either Math or Biology. Students planning to major in the sciences take three of the humanities courses (1,2,3,4) and select two science courses they wish, including the two Directed Studies courses.

The second year focuses on the social sciences and offers courses in Economics, Law and Society, Literature, Philosophy, Religious Studies, and Sociology. Each of these fields is presented through topics considerably more narrow than the courses offered the first year. The courses, particularly in the first year, are taught with lectures and sections, but the emphasis is on the sections which usually account for two of the three hours of weekly meeting.

The Program Director indicated that Directed Studies in recent years has become more specialized which has hurt the program by fostering less of a feeling of common interest among the students in it.

Seven of the twenty-four faculty who taught in Directed Studies in 1970-71 were interviewed in March, 1970-71. Their overall opinion of the program was split; 42% positive, 29% negative, and 29% neutral.

The professors expressed three reasons for teaching Directed Studies. 43% were asked by their department chairmen, 43% volunteered out of interest, and one professor volunteered because he had liked the program when he participated as a student. In most cases, 71%, participating in Directed Studies counted as part of the instructor's regular course load. In other instances the instructor did not feel overburdened.

The strengths of the program pointed out by faculty reflected the special nature of the program. Students were said by all to be quicker. Forty-three percent of the sample noted the small classes in Directed Studies as a strength, while others said the program was flexible and gave faculty more freedom to teach but was more demanding of students (29%).

The weaknesses pointed out, however, were significant. Elitism, the program's greatest weakness, was also its greatest strength. Forty-three percent of the faculty felt the program was for the wrong people; it "encouraged verbal kids to talk too much" while leaving the nonverbal students in big lectures. Another commonly mentioned weakness (43%) was the lack of coordination in the program. It was felt that each department worked independently, thus providing little integration in the program. Other weaknesses mentioned were that, recently, fewer faculty were volunteering to teach Directed Studies so that the staff was being dominated by new and younger drafted teachers, students were "imprisoned" in the program for a year with no way to get out, it is impossible to find seventy-five freshmen with sufficiently common backgrounds, and, as an extension of the lack of departmental coordination, a feeling that the program is falling apart. In addition, 29% of the professors were disturbed that the Directed Studies students didn't criticize the program more. They thought this occurred because students were cowed by the feeling of having a good thing not available to others.

The Director and the Course Critique felt most students in Directed Studies liked it. The Course Critique pointed out several strengths and weaknesses of the program. The strengths were that students and their work received greater faculty attention, a sense of community results from common class membership, and the better quality of Directed Studies survey courses than those in the regular curriculum.

The major weakness cited was the failure of the integrated approach for Directed Studies, crumbling immediately after the first course on the Greeks. However, Directed Studies is considered by the Course Critique to be a poor program for students who dislike writing, are sure of their major, or are introverted in class.

EXPERIMENTAL COLLEGE PROGRAM, BERKELEY

The first two year cycle of the Berkeley Experimental College Program began in September, 1965 and was completed in June, 1969. In July, 1965 a description of the program was sent to all Berkeley freshmen with an invitation to join. 325 applications were received from the 4800 freshmen, and 150 students were randomly chosen.

The Experimental College program was based on the 1920's Alexander Meikeljohn Experimental College at the University of Wisconsin. The Berkeley ECP curriculum was divided into four periods: Greece, 17th Century England, the American Constitutional Founding, and the Contemporary Scene. It had a theme or problem orientation exploring freedom and authority, individual and society, war and peace, conscience and the law, and acceptance and rebellion. The periods were used as historical clusterings (cultures) through which to examine the themes. The program material centered around a short common reading list. The course calendar listing readings and illustrating curricular division follows:

CALENDAR FOR FIRST YEAR, READINGS (THREE 10 WEEK QUARTERS)

Fall Quarter

1. Homer's Iliad
2. Iliad
3. Homer's Odyssey; Xenephon's Anabasis; Hesiod's Works and Days
4. Thucydide's Pelopennesian War)
5. Pelopennesian War)
6. Pelopennesian War)

Supplemented by selected lives from Plutarch and comedies by Aristophanes

7. Aeschylus' Oresteia
8. Sophocles' Three Theban Plays
9. Euripides' The Bacchae
10. Plato's Apology and Crito

Winter Quarter

1. Plato's Gorgias
2. Plato's Republic
3. Republic
4. Republic
5. Bible
6. Bible Selections from the King James version
7. Bible
8. Shakespeare's King Lear
9. Machiavelli's The Prince

Spring Quarter

1. Milton's Paradise Lost
2. Paradise Lost
3. Hobbe's Leviathan
4. Leviathan
5. Leviathan
6. J. S. Mill's On Liberty
7. On Liberty
8. Arnold's Culture and Anarchy
9. Culture and Anarchy
10. General Review

SECOND YEAR

Fall Quarter

Henry Adams, The U.S. in 1880
The Flag Salute Cases U.S. Supreme Court
The Federalist Papers and the Constitution
McCulloch v. Maryland John Marshall
Calhoun Disquisitions on Government
Edmund Burke Selections

Winter Quarter

Supreme Court Cases on church and state, conscience, freedom
Thoreau (selections)
Meiklejohn   Political Freedom

Spring Quarter

Marx (selections)
Freud (selected works)
The Education of Henry Adams
The Autobiography of Lincoln Steffens
The Autobiography of Malcolm X
Meiklejohn   Education Between Two Worlds

The ECP student needed to take one course per semester outside the program. The program was therefore, two-thirds to three-quarters of the students' academic load. Only one student suggested that more outside courses would be desirable. Instead of the usual course building unit, the program was broken down into lectures, seminars, and conferences.

Lectures were scheduled twice a week for about an hour and a half each and all students and faculty were expected to attend. Though the lectures were coordinated with the reading, they did not discuss what was read or give glosses, rather they were intended to try to raise questions and examine problems by employing the literature. Lecture formats varied from a single faculty lecturer either from within or from outside the program to a group presentation by some or all of the participating faculty. The only uniform feature of the lecture was that all ended with a question and answer period.

The lectures received the least enthusiastic comment of any feature embodied in the program and students said they suffered from much faculty bickering. Suczek, et. al. in *Personality Development in Two Different Educational Atmospheres*, which discusses the first cycle of the Tussman program, said, "From the outset these meetings - often abandoned and then reinstated - were a source of major disappointment to faculty and students alike" (pp. 37-38). Tussman too recognized shortcomings in the lectures saying, "With some exceptions Tuesdays (lectures) fell apart . . . when deliciously real faculty quarrels boiled over into public view. The staff was generally upset and worried . . . students (were) frequently disappointed." Only one student in the sample praised the lectures. Faculty conspicuously omitted discussion of the lectures.

Despite the depth of criticism, Tussman felt the lectures a necessary unifying experience in a common learning program.

Seminars went through much change in the two cycles of the program. In Fall, 1965, it was planned that students would meet in groups of thirty one afternoon a week. These groups proved too big causing several instructors to split the group in two with a teaching assistant. Because fifteen was also too large a group and because one meeting a week was insufficient, groups of eight students meeting twice a week, once alone and once with an instructor, were introduced. The structure of the individual seminar was left at the discretion of the individual instructor.

Enthusiasm for seminar structure was great. Thirty-six percent of the sample characterized the seminar as a principle strength of the program. Twelve percent of the students and one-third of the instructors remarked upon the weakness of the student attended seminar, indicating poor attendance and inability of the seminar to make progress. The lack of success of these sessions indicates a student dependence upon faculty supervision.

Writing was viewed as an essential part of the program. Tussman felt that each student should spend at least an hour a day writing, believing that writing is explanatory of the mind at work. For this purpose, students were asked to maintain a journal, which would be examined periodically. In addition, five formal papers were assigned per semester with specified form and topic. Initially a term project was also required, but poor organization caused the abandonment of this requirement. During the second semester of the first program, Tussman noted that many students never got started on the projects and many of the undertakings were not in spirit of the assignment.

In the first cycle, five Berkeley faculty were hired, two from Speech, one from Aeronautic Engineering, one from Philosophy, and one from Political Science. After one year, one faculty member who had secured only a one year leave left the program as did another who was dissatisfied. In the second cycle, six faculty were involved and all completed the program. The first cycle faculty was recruited by Tussman from Berkeley faculty acquaintances expressing interest in teaching the program. The second group consisted of friends chosen by Tussman from outside the Berkeley campus.

The Suczek study explains that the first cycle faculty could only agree that they wanted to take part in the program.

Although they spent the entire summer previous to the launching of the program planning, one-third of the faculty remarked that they were lost until the program began. Initially a collegial relationship among the participating faculty was sought. Quickly, however, Joseph Tussman emerged as the ECP director. A director was immediately needed to handle small details and Mr. Tussman was given this resonsibility. However, it should be noted that Tussman created the program with definite ideas about what it would do. All of the faculty members interviewed resented Tussman's overdirection, while one-third of them acknowledged that someone had to make decisions. Tussman and Suczak both pointed to a similar faculty character type. The ECP faculty had in the past always worked alone in planning their courses, had a strong notion of academic freedom, and were strongly grounded in their disciplines. One faculty member from the second cycle noted very importantly that faculty "simply had to have a shared vision of the aim of education" or "a program like this degenerates into the mere workings of the great books and frequent tutorials."

The second cycle differed only in that a collegial relationship was never tried. Tussman assumed the directorship from the start. Thirty-two percent of the students in the sample characterized Tussman's leadership as overbearing.

Although faculty readily admitted disharmony in the program, two-thirds highly praised the advantages of working with an interdisciplinary faculty. The faculty members each felt the program overly demanding in time commitment. It was clearly impossible to continue with research or outside activities. One instructor suggested one year in three be spent outside the program, while another suggested one year in four.

Both students choosing the ECP and those rejecting it were resonding to a dean's letter describing the program sent to all freshmen during the summer. The letter said the program ". . . departs rather sharply from the traditional pattern of lower division work . . . The program (will be) . . . flexible . . . the spirit informal . . . experimental program . . . risks as well as rewards . . . Problems will call for imagination and flexibility . . ." These descriptions, no doubt, yielded positive and negative images in minds of the freshmen reading the letter depending very much on the individual. In this way it is possible to see that self-selection was likely linked to personality differences.

The ECP student was primarily a social science or humanities concentrator. The demanding nature of the science major mitigated against participating in the program and graduating in four years.

Twenty-two percent of the students in the ECP left the University (although about 40% left the program), while 40% of the students in Letters and Science left the University.

An important comment made by 40% of the student sample was that students were not mature enough to obtain the full value of the program. (It would have been surprising if they had indicated the opposite, since that so rarely happens without hindsight.) In addition, one faculty member indicated the program was better suited for seniors while another felt students lacked background, and two other faculty noted that students needed maturity to utilize the program effectively. Twelve percent of the students suggested screening to eliminate these problems.

Students expressed difficulty in making the transition from the.ECP to the upper division. Of the ninety students who completed the first cycle, approximately fifteen took their junior year abroad. Of the student sample interviewed, 44% found they were not prepared for the nature of upper division study (not to be confused with the content); 16% more were not prepared for disciplinary study; and 20% suggested that the upper division program lacked relevance and cohesion. One faculty member also suggested that participation in the ECP limited student ability to adjust to upper division courses. In addition, 16% of the students suggested increasing the program's length to four years. In a not yet completed study by a former ECP faculty member, it is said that ECP students had higher grades and made fewer changes in upper division majors. After completion of the two year period when students in the Suczek groups were retested it was found that, though personality differences existed, "the differences between them (the groups) was no longer significant."

Although the ECP was non-residential, an old two-floor fraternity house at the edge of the Berkeley campus was provided for the program. The top floor was used for faculty offices. On the main floor was a large lounge, several small lounges doubling as conference rooms, a library, and a kitchen. Very little furnishing was present and what was there came as gifts or loans. The house never emerged as a community center for the College. It did little more than serve as the place for lectures and conferences.

It is necessary to realize that the program operated as an organic whole within which were many structures; to this point the UCE study has emphasized only the trees omitting a wondrous forest.

Faculty and students found it difficult to approach the program in terms of structures, rather words like "coherent," "relevant," "broadening," words not commonly used to describe a lower division program, were employed. All faculty praised the conception of the program, even the one who was previously described as bitterly attacking Tussman, while 36% of the students characterized the entire program as excellent. Twelve percent of the students and one faculty member said the program was the best lower division program in America. Two-thirds of the faculty called the program a great teaching experience. In fact, several faculty talked of taking part in, or initiating such a program elsewhere, while one faculty member did so at the University of British Columbia.

An important feature inherent in the ECP was the political emphasis. This feature was criticized by 48% of the students and commented upon by two-thirds of the faculty. Tussman's bias in the program was that students could be given a sense of freedom by being taught the obligations of good citizenship. It has already been shown that his orientation differed from that of other faculty in this respect. Several of the faculty and students referred to the program's process as "Tussmanizing". One student in particular talked of a cathartic experience in realizing that he no longer thought about things, but rather applied a "Tussmanized" standard. Sever other students made similar remarks, but less dramatic in nature.

Only 8% of the students commented on the degree of freedom while only 6% complained of the lack of freedom embodied in the program. One additional faculty member felt the program failed for its lack of freedom. Suczek, on the other hand, said of the first cycle students that they all perceived the program as offering great freedom. The students indicated to him that they were free to pursue their own interests in a manner of their own choosing, whether they perceived the program critically, favorably, or indifferently.

One last explanation needs to be made regarding the nature of the interviews. Sample faculty and students had been visibly and certainly emotionally affected by their participation in the Experimental College Program.

In most other programs observed, disinterested responses by faculty and students were common; however, the ECP participants leapt at the opportunity to discuss their experiences and paternalistically discussed the ways the program could be improved, a subject each interviewee had previously thought about in depth. The feeling of paternalism and proprietorship resulted in many an overzealous comment or attitude verging on worship or hatred. This should be borne in mind in finally assessing the successes and failures of the Experimental College Program as portrayed in this section.

ST. JOHN'S COLLEGE

St. John's is composed of 300 students, 48 tutors, and administrators. All administrators at, or above, the level of assistant dean are considered tutors and teach in the program, though generally with a reduced course load.

The first year at the college is devoted to the Greeks, the second to the Romans and the Medieval period, the third to the seventeenth and eighteenth centuries and the last to the nineteenth and a small part of the twentieth centuries. All students were asked whether they would like to see the curriculum broadened or narrowed in any way. Eight percent of the student sample said they should have more choice in what they study, and six percent said books written after 1925 should be included. One of those who didn't want the curriculum changed said, "There is a general acceptance here that you don't mess with something that works." On the other hand, one junior said he can't wait to get to graduate school to specialize and read the same book for more than one week.

The books, which were praised by students and faculty alike are all acknowledged classics which, during the past forty years at Columbia College, the University of Chicago, the University of Virginia, and St. John's, have found their way onto the list of Great Books. The list of books in the program varies only slightly from year to year.

Some tutors thought that the different emphasis St. John's professes was important, saying the major strengths of the program were the lack of pre-professional and pre-graduate school training, or the lack of disciplines and the abandonment of the separation of the humanities and sciences, or simply that the program was coherent and one could refer to other parts of it in a class and expect to be understood.

Although the structure of the program has changed slightly through the years, it is essentially the same for each of the eight semesters normally needed for completion.

CLASSIFICATION OF AUTHORS, ACCORDING TO SUBJECT MATTER, THROUGH THE FOUR YEARS
1970-72

	Literature	Philosophy and Theology	History and Social Science	Mathematics and Natural Science	Music
First Year	Homer Aeschylus Sophocles Euripides Aristophanes	Plato Aristotle Lucretius	Herodotus Thuycdides Plutarch	Euclid* Nichomachus* Ptolemy* Lavoisier* Dalton*	
Second Year	Virgil Dante Chaucer Rabelais Shakespeare Donne* Marvell*	Aristotle Epictetus Plotinus The Bible Augustine Anselm Thomas Aquinas Luther Calvin Montaigne Bacon	Plutarch Tacitus Dante Machiavelli Gibbon	Ptolemy* Appollonius* Galen Copernicus* Kepler Harvey* Descartes Darwin Mendel*	Palestrina* Bach* Mozart* Beethoven* Schubert* Verdi Stravinsky*
Third Year	Cervantes Milton Swift Racine* Melville Fielding	Descartes Pascal Hobbes Spinoza Locke Berkeley Leibniz Hume Kant	Locke Rosseau Adam Smith U.S. Constitution Hamilton, Madison, Jay Tocqueville	Galileo Kepler Newton* Leibniz Huygens*	Mozart
Fourth Year	Moliere* LaFontaine Goethe Tolstoi Dostoevski Baudelaire* Rimbaud* Valery* Yeats*	Hegel Kierkegaard Nietzsche William James Pierce	Hegel Marx Documents from American Political History	Faraday* Lobachevski* Dedekind* Maxwell* J. J. Thomson* Bohr* Millikan* Schrodinger* Darwin Freud Einstein	

*Studied in the tutorials or laboratory

Students attend a seminar based on books from the program for each of the four years. Seminars contain fifteen to twenty students and two tutors, and meet twice a week for at least two hours. They are started by one of the tutors who asks a question, about that week's reading, and a free-flowing discussion follows. This was a chief strength of the program for over one-eighth of the students. A weakness mentioned comparatively frequently, however, was the "idle rap." This was a situation felt to be particularly apparent in seminars, in which discussion is ruined by dull or lazy people not contributing, or by individuals dominating discussion in order to impress either themselves or their tutors.

Students also have a language and a mathematics tutorial each year. In each of these, eight to fifteen students and a tutor spend one hour, four days a week trying to, in one case, learn the nature of language by studying Greek and French for two years each, and in the other, to learn the nature and workings of mathematics.

In addition, groups of fifteen to twenty students meet with a tutor twice a week for laboratory. The topics studied here are as follows:

	FIRST SEMESTER	SECOND SEMESTER
1st Year	Theory of Measurement	Particle Analysis of Matter
2nd Year	Biology	
3rd Year	Classical Mechanics, Optics and Electromagnetism	
4th Year	Atomic Theory	

Some students said the laboratory should be more technical.

A music tutorial is given to all students in the sophomore year to give "an understanding of the phenomenon of music." It is attempted to tie the study of music to the liberal arts by showing its relation to language, rhetoric, and poetry while at the same time showing its unique aspects. Several students said the different backgrounds of students particularly plagued the mathematics and music tutorials, while one tutor felt that specialists maintained the music program more than any other area. He acknowledged that music presented a special problem because of the varied backgrounds of the students, but said that the tutors nevertheless seemed to expect too great an understanding from the students. He felt this problem was only compounded by the music program being the fifth course in the sophomore year which, he said, is the toughest year, so that students often give less time to music than to other courses.

Preceptorials were added to the program in 1962. These allow a nine week period in which juniors and seniors, with a tutor, can study one book or theme in depth. This replaces the seminar for that period. Although all upperclassmen must take preceptorials they do provide the only place in the curriculum where the student has some choice, since he can choose any of the fifteen to twenty preceptorials offered each year. Preceptorials were praised by tutors for permitting a chance to study one area of interest in depth and lessening inbreeding. Twelve percent of the tutors felt there should be more offered and that the nine week period should be lengthened, although all agreed they should be kept out of the first two years of the program. The students interviewed had either liked their preceptorials, were looking forward to them, or had no opinion. Those who had liked them mentioned that they provided all the relevance needed in the college, and that they were small and "unrushed." (Typical of subjects providing this relevance seemed to be Descarte's Discourse and Plato's Symposium.)

Another component of the St.John's program is the Formal Lecture, a Friday night presentation by an outsider or tutor; followed by a discussion. These are held almost every week, and often attract people from surrounding communities as well as students and faculty. This structure received praise from students and faculty alike.

From this description of the structure of St. John's, it should be clear that the conventional way of describing a college by breaking it down into departments, or requirements versus electives, or discussing its general education requirements, is not applicable to St. John's. There are no departments; all faculty are simply St. John's tutors. And there are, except for the preceptorials, no electives; all students take the same required program.

Students were asked how well the program had lived up to their expectations. They responded as follows:

Very Well--51%   Fairly Well--30%   Poorly--19%

The teaching load at St. John's is unique. It is important to understand first that the goal of every tutor is to be able to teach the entire program, although there are now only a handful of tutors capable of doing this. It was said thateven new tutors can teach the parts of the program they want without having the disappointment common elsewhere of having to "earn" the right to teach the best courses.

The average tutor's weekly schedule includes four class hours for the seminar, four class hours for a tutorial, and another four or five hours for an additional tutorial or a laboratory. In addition, there are up to forty-five paper conferences with individual students each term, plus sitting in oral exams and don rags (See Grading), and the usual burdensome faculty committee work. Furthermore, tutors spend a large amount of time meeting with individuals and groups in the coffee shop, and, in addition, there is little secretarial help available. Finally, many tutors audit other classes so they will be able to teach them in following years. This was one of the chief strengths of the program. One tutor felt the first few years as a faculty member should be devoted more to auditing and less to teaching in order to give the tutor greater preparation and less chaos.

The most common weakness mentioned by tutors was the amount of time consumed by the program. Tutors said that there is simply too much to do, although they were quick to acknowledge that shortening the reading list might remove some of their favorites, and lessening the workload is a financial impossibility without weakening the program. Individuals said there is little time to pursue a line of inquiry, they can't follow their individual interests, some books are not studied adequately, and the demands on students are too great. Two factors, however, tempered this criticism. First, even from those who protested the skimpy treatment of some works, etc., there was a strong feeling that students should be instilled with an interest in the Great Books which will last them all their lives. If the program is successful, the students will go back in future years and study the works in greater depth. Second, as an assistant dean pointed out, the program is flexible, and as a consensus is reached that there is too much material, some works are dropped. Connected with this were the comments of the younger tutors that it is "a frantic existence trying to carry such a load and deal with so much new material."

Accepting a position at St. John's involves a great risk. Because there are less than fifty hours a day, one must devote oneself completely to the program in order to fulfull what is expected. Thus, the tutors establish neither a reputation nor contacts in their field, or for that matter, in any part of the academic world outside St. John's. This, coupled with the fact that 75% of the new tutors are denied tenure would seem to make a teaching position at St. John's as desirable as a hair shirt, yet hundreds of applications have been received for the few open teaching positions.

What is important to note is that faculty at St. John's accept the limitations of their school in a different sense than other college faculties. They, for the most part, oppose changing the program in any way, even if it meant their particular complaint could be removed. In addition, despite their criticisms, they don't leave St. John's unless they are forced to. They are very dedicated to the program and willing to accept the risk involved in working at a school which allows them no chance to make a "professional reputation".

Because St. John's accepts students only as freshmen, the student body is weighted toward the early years. Thus, in 1969-70, there were 125 freshmen, 97 sophomores, 66 juniors, and 59 seniors. Currently, the Admissions Office aims for a freshman class of 126, or 21 in each of six seminars, and 14 in each of nine tutorials. Faculty consistently praised the students for their high intelligence and commitment to the program.

The program was a significant factor in all but one sample member's decision to come to St. John's. About half mentioned the program by name as the most powerful attracting force, while other students listed reasons closely connected to the program.

Although the number of applicants has increased beyond that of fifteen years ago when St. John's grabbed almost anyone who applied, the Admissions Office would like to have about three times their present number of applicants. Only once did they approach that figure, following an article in the Saturday Review in 1963.

Transfer students are an interesting phenomenon at St. John's. The program is viewed as an integrated unit and therefore all new students, including transfers, start as freshmen. (This also includes a few students each year who start St. John's after only finishing the junior year of high school.) Yet about 20% of each year's freshman class consists of transfer students. Some are people who dropped out of college for a few years, while others transfer directly from another school.

The four years of matriculation required for all students causes a peculiar problem. That is, that the attrition, which is quite high, cannot be compensated by accepting a large number of transfer juniors. The attrition rate seems to be consistently over 50% during the four years, i.e., less than half a freshman class graduates four years later. Some of the drop-outs, perhaps one-sixth, are asked to leave, a larger group transfers to other schools, and, of the rest, administrators are quick to point out, some come back and finish years later.

From the start of the new program until 1967 about 2400 students entered St. John's and 642 graduated (27%). These figures include the Santa Fe campus, open since 1964. Of the graduates, 59% went to graduate or professional school, and a large percentage went into teaching. A study compiled by the alumni office in 1967 shows the distribution of fields for the 380 graduates who, at that time, had attended graduate school. The study indicates a wide diversity of professional fields. Seven alumni are currently St. John's tutors.

Some felt that St. John's intellectual withdrawal from the rest of the academic world gave its students and tutors too great a feeling of superiority. One tutor described the present attitude at St. John's to be somewhat "monastic," and he felt he would be happier if there were more of a tolerance of the idea of reading the Great Books without devoting one's life to them. One tutor said that the faculty devote themselves so totally to the program that they tend to become passive and uncritical. Another felt the common program itself was a problem because the lack of diversity of tutors' interests tended to make faculty life somewhat boring. One tutor simply said the school is a "little too rigid." Students too pointed to the "incestuous," "ivory tower" nature of the school. This was noted by 11% of the students with the added feeling that St. John's despises other educational ventures to the extent that it becomes bored with itself and ignores its own problems. Several students thought the major problem was that St. John's was too small, and others said it was too intense. Another group said it was a dull place socially, and several others blamed all the college's woes on being in a town as "boring" as Annapolis.

Among the changes suggested was that St. John's become part of a larger college complex, although the tutor who suggested this was afraid that some of the closeness now present might be lost. He also suggested that perhaps an environment more like that of the Santa Fe campus, which is surrounded by mountains, would give people a way to escape every now and then. Another suggested solution to the same problem was that students be encouraged to work off-campus to ease the claustrophobia.

FACULTY STRUCTURE AND CONCENTRATION

DIVISIONS

The objections to traditional departmental structures have caused some colleges to broaden their departments or to create distinct structures to sponsor interdisciplinary work. One method has been to try to increase the importance of the divisions or schools (Social Science, Science, Humanities) which house the departments by giving them greater responsibility. Four of the colleges studied--Bard, Florida Presbyterian, Reed, and New College used this approach.

Bard College has, in recent years, considered divisions its major structural units, giving them not only the responsibility for faculty hiring, but also requiring each student to "apply" to concentrate in a division.

The Bard faculty indicated that the divisional structure had, at times, fostered greater inter-departmental contact, but that this had led to little inter-disciplinary work or team teaching. Professors in departments with only one or two members felt most involved in the division, while others acknowledged that as the school has grown, the divisions have become unwieldy, forcing reliance on a smaller unit--the department.

Both Florida Presbyterian and New College started with an emphasis on divisions, and the divisions have continued to be the administrative unit in terms of faculty hiring and funding. Nevertheless, professors at Florida Presbyterian expressed feelings similar to those noted at Bard, indicating that professors in small departments found the division more important for course planning and meeting others than did faculty in larger departments. In addition, all professors in the natural sciences felt their department was a more significant unit than their division.

Almost all faculty at New College, on the other hand, felt the divisions functioned sufficiently well to make departments either secondary or insignificant. This is due, at least in part. to the fact that each professor at New College functions as an individual administrative unit in that the instructor has almost complete freedom regarding what he teaches. In addition, the school is so small that the resulting gaps in each department's offerings could not otherwise be avoided. It was noted, however, that there has been little team teaching at New College despite the success of divisions, which have occasionally become as inner directed as the departments they seek to avoid.

Divisions at Reed College serve as units responsible for administrating course offerings. Faculty hiring is conducted by search committees composed of two professors from the appropriate department and one from outside the division.

Faculty reaction to the divisions was consistent only within each division indicating at least an accepted relationship between each department and its division. Professors in the History and Social Science Division, for example, considered it to have precedence over its constituent departments, while those in the Division of Math and Science agreed their division was irrelevant. The Division of Literature and Languages functioned well and made most major decisions because, it was felt, the departments within it fit together logically. There was no indication that the existence of divisions had encouraged inter-disciplinary work at Reed.

INTER-DISCIPLINARY STRUCTURES

Three other schools studied--University of California, Santa Cruz; University of Wisconsin, Green Bay; and Prescott College--were each founded recently with structures designed to avoid departmental domination.

Faculty hiring at Santa Cruz relies upon the University's cluster college structure; a university consisting of constituent colleges. Although the academic structure is divided into three standard divisions, the disciplinary units within each division, called Boards of Study, differ from departments in two ways. First, they have no budget, and second they hire faculty only in conjunction with the Santa Cruz Colleges. Thus, although each Board functions campus-wide, each professor must be connected with one college in addition to this Board. The faculty offices, with the exception of those in the Natural Sciences, are grouped randomly within the Colleges, and not by department.

The faculty at Santa Cruz were extremely satisfied with this arrangement because it made it easier for them to know colleagues in other fields, lessened departmental competition and jealousy, and encouraged inter-disciplinary work. It was noted that the random assignment of faculty offices was also responsible for some inter-disciplinary efforts since professors from varied fields often became friendly by virtue of these assignments.

The faculty cited difficulties, however, in staff recruitment since all appointments must be approved by both a College and a Board whose interests do not always coincide. Professors also noted that Boards have little flexibility in making future plans and that there is occasional duplication of effort between the Colleges and the Boards. More significantly, most of the professors in the Natural Sciences felt little attachment to the Colleges, considering themselves members of a department constricted by lack of budget and the occasional necessity to compromise in hiring.

Despite the objections noted, the Santa Cruz structure seems to deal effectively with the problems raised by departmentalization in two of the three divisions, with faculty in the third division feeling only unaffected rather than harmed by the system. It must be realized that the Santa Cruz faculty were aware of this structure when they were hired so that a similar plan might not meet with equal enthusiasm at another school. However, the assignment of faculty offices on non-departmental lines might be an easily implemented device for reducing departmental inbreeding and perhaps stimulating inter-disciplinary, team teaching.

Since its inception in 1966, Prescott College has chosen to stray even further from the traditional departmental structure by offering a curriculum divided into five inter-disciplinary centers--The Center for Contemporary Civilization; The Center for Language; The Center for Man and Environment; The Center for the Person; and The Center for Systems. These centers each pursue a series of themes changing from year to year upon which its courses are organized, and is the administrative unit through which faculty are employed.

The outcome of this arrangement varied from center to center. The Language Center of seventeen faculty, which is by far the largest and most diverse, was characterized as a directionless hodge-podge by both students and faculty. On the other hand, the next largest center, that of Man and Environment with thirteen faculty, was described as three distinct departments--Anthropology, Biology, and Geology--and Anthropology was said to be "as much a department as any university undergraduate Anthropology department, only more professional." The three other centers, each employing fewer than seven professors, operated more effectively as inter-disciplinary units, however, it should be realized that the Center for the Person was not an acceptable concentration area and that the small size of these three centers precluded internal departmental groupings.

Among the benefits of the center system cited by students and faculty was the inter-disciplinary contact provided professors with resulting inter-disciplinary and team taught projects. At the same time, a significant number of professors, finding the centers growing increasingly isolated and self-contained, felt the level of inter-disciplinary activity did not represent a significant improvement over more conventional schools. Impressions of the concentration structure varied, although a thread of disorganization weaved itself through most comments.

A program similar in structure to Prescott's center is also being attempted at the University of Wisconsin's new college in Green Bay (UWGB). Unlike Prescott, UWGB has chosen to focus its entire curriculum on the environment, and therefore its centers and themes--called colleges and concentrations--are concerned with that issue.

There are four colleges with associated concentrations: **(from the UWGB Catalog)**

1. College of Human Biology--"Emphasizes human adaptability to the social and physical environment."

2. College of Environmental Sciences--"Emphasizes the problems of the natural environment."

3. College of Community Sciences--"Urban Analysis, Modernization Process."

4. College of Creative Communication.

In addition to these colleges, UWGB has a School of Professional Studies which attempts through its offerings to fill the gaps left by the colleges: Teacher Education, Business and Public Administration, Leisure Sciences, Mass Communication, and Social Services.

Although the faculty is organized through the concentrations, it is also divided into what are called "options." The options correspond to traditional disciplines, and students can select one to combine with their concentration. However, the options are intended to be merely groupings of faculty with no budget, though they do help recruit and make recommendations for faculty hiring.

The faculty at UWGB, like that at Prescott and Santa Cruz, had, in the vast majority of cases, been attracted to the college by its distinctive curricular structure, so that their interviews during the school's second year showed a high level of excitement regarding college efforts. It was noted, for example, that approximately 10% of the College's courses have been team-taught. However, since professors from each discipline did not form the hiring unit, some difficulty in faculty recruiting was being experienced. In addition, a few professors indicated fears that some areas had already become too departmentalized.

Indeed, there is a very close correspondence between the theme of colleges and traditional divisions in other colleges. From the Chart, it appears that the College of Community Science is a Social Science division, the College of Creative Communication is a division of the Arts and Humanities, and the Colleges of Environmental Science and Human Biology share the division of the Natural Sciences. It does reflect favorably upon the future of interdisciplinary work at UWGB. At least 5 of the 11 concentrations suggest courses for their students in other concentrations and several options. It is also encouraging that each concentration also involves at least two options and most include 4-6.

THE OPTION AFFILIATION OF PROFESSORS FROM EACH COLLEGE AT UWGB.

College of	SCIENCE (Chemistry, Biology, Physics, Mathematics, Earth Sciences)	SOCIAL SCIENCE (Anthropology, Economics, Geography Political Science, Psychology, Sociology, Public Admin. Business Admin.)	HUMANITIES (Literature and Languages, History, Philosophy)	ARTS Performing and Visual Arts)
COMMUNITY SCIENCE	2	45	0	0
CREATIVE COMMUNICATION	1	1	50	31
ENVIRONMENTAL SCIENCE	55	0	0	0
HUMAN BIOLOGY	8	0	0	0

CONCENTRATION

Concentration is tied closely to faculty structure. Under the traditional division/department structure, each student must choose a department in which to concentrate. Students are usually asked to select a tentative major at the start of the freshman year and to make a definite declaration by the end of the first year.

TRIAL MAJOR

Bard College formalizes this procedure by having a "trial major" during the freshman year. All freshmen must select a major and take two of their four courses in that field. A student may change majors as often as desired, however, several departments require a basic background obtainable through specified courses to be taken prior to a student's acceptance as a major by the department's division in the sophomore year.

The trial major was intended to quickly expose students to both breadth and depth, but it has become, in the words of a Bard.administrator, only "the fossilized remains of a program." The dominant reaction of both students and faculty to the trial major was that it was useless since students went through a succession of alternate majors, so that the concentrated trial major had little feedback value for students, representing only a discarded past interest. Some students even considered it detrimental because of the course selection restriction it imposed, including both the requirement of two courses in one area and the practice by several departments of offering courses for trial majors alone. In addition, some faculty felt students became trapped by their trial major.

On the other hand, a very few students felt the trial major had saved them from majoring in an area they would have disliked. Despite these remarks, the trial major concept seems to provide only a needless formalization of a simple process employed without effort by many colleges.

In the past, most concentration programs, consisting of major courses and cognates, absorbed about one-half of a student's course selections, but departments in the Social Sciences, and Humanities and Arts have gradually lessened requirements in recent years so that only one-fourth to one-third of a student's courses must be in his major. Similarly, departments in the Social Sciences and the Humanities and Arts have reduced the number of specific requirements so that, at many of the sample schools, there are only one or two common courses in each department required of concentrators, and in fact, numerous departments require only a specified number of their upper-level courses. Departments in the Natural Sciences have, in most cases, maintained the large number of required courses, many of which are specifically designated. This, combined with a required sequential order, forces the science concentrator to commit himself to his major much earlier, generally at the beginning of the freshman year.

The number of students choosing to major in each division varied, as could be expected, from college to college, and year to year. In general, however, unless a school is strongly identified with the Natural Sciences, the number of science majors tends to be less than twenty-five percent.

DOUBLE AND JOINT MAJORS

While a few schools have tried to avoid the standard departmental majors completely, many more have added options which attempt to compliment the traditional system. The simplest of such offerings is the Double Major, studied at Haverford and Santa Cruz, which necessitates a student's completion of all the requirements of two departments. Because a double major requires such a large percentage of a student's course load, few use the option. Whether or not this option is formally available at a college, it is possible for any student to theoretically have a double major by completing the requirements of any two departments. Haverford, however, regulates double majors by reserving their use for only "high ranking students" who obtain the "permission of the Associate Dean as well as (that of) the Chairman of each department concerned."

The factors commonly cited by students for creation of double majors were a great interest in two disparate fields or an interest in a field covered by two departments. For the later reason, some schools offer the possibility of a "joint major." Santa Cruz's employment of this option is typical. A student must receive permission to construct a program fulfilling most of the course requirements of two departments. The comprehensive major exam, required at Santa Cruz, is satisfied for the joint major by the administration of an exam prepared by the participating departments. Haverford's "interdepartmental majors" are similar, although it is specified that the Chairman of one of the departments will serve as the student's advisor.

Double and joint majors were undertaken--9% at Haverford and 7% at Santa Cruz--though they have, in general, been satisfactory for students employing the option. The reason so few schools have formally offered such options is that a student with interests extending beyond one department can usually major in a recognized field and still find time to take the courses he wants in another. To most students in the Natural Sciences, where such flexibility is more difficult, double and joint majors are not usually attempted.

INTER-DEPARTMENTAL MAJOR

The specified inter-departmental major is another alternative to traditional majors. Such offerings are either proposed by students and faculty or grow out of concentration options such as joint, or student created majors. In these situations, the demand for certain inter-disciplinary programs is so constant that a faculty will establish the subject as an on-going department or as a major listed in the catalog and administered by an inter-departmental committee. Both models utilize in their programs a large percentage (frequently one-hundred) of courses and staff from other departments. Only the second category--non-departmental programs--will be considered here.

Reed offers majors in American Studies, International Studies, History-Literature, Mathematics-Economics, Mathematics-Sociology, Philosophy-Literature, Philosophy-Religion, and special programs temporarily linking different disciplines. In 1971, about 8% of the seniors graduated with inter-departmental majors, including 3% who had created special programs. These are distinguished from student-created majors in that they still emphasize departments as the unit for major construction.

Yale offers a similar option, called "Special Majors." They are:

> "History, the Arts, and Letters"- About twelve students are normally enrolled in this program (less than 1%).
>
> "Social Science Major"--started in 1956, originally required a student to be in the top half of the class and was later revised to the top fifth. While designed for twelve to fifteen students a year, it attracted only five members of the class of '72 and a decision was made to suspend it for two years in order to rethink and revise it.

"Culture and Behavior."

"Combined Science Major"--encourages students to pick one scientific area to focus upon.

Trinity offers three such majors and Brown offers four.

No general rules for the operation of such programs were found. The observed methods of supervision varied from faculty, or student-faculty inter-departmental boards, single faculty directors, to no administration.

An increase in departmental proliferation has accompanied the growth of iner-departmental programs. Faculty frequently cited the lack of budget and the need to rely upon courtesy appointments as the reason the programs are ill equipped to grow with increased enrollments or even fend for themselves in a departmental environment. As a result, the largest programs have been forced to seek departmental status in order to survive. Faculties, however, have been reticent to support such transformation, for fear of departmental funding loss following affirmative action, further dividing an already tight university budget.

STUDENT-CREATED MAJOR

A more significant modification of the concentration system is the addition of student created majors. This option, which allows students interested in non-departmental areas to form their own programs has been adopted by many schools in recent years. Sixteen of the twenty-one sample schools requiring traditional majors, offered this option. Student-created majors were studied at: Antioch, Bowdoin, Brown, Haverford, Reed, Stanford, Santa Cruz, Trinity, and Yale.

The student created major is the easiest mechanism to establish in order to give students the widest latitude of choice in major study.

Most of the student created majors observed in the study either combined two, or occasionally three disciplines, or were focused on a specific period, problem, or culture by using material from several departments. While many such programs encompassed material exclusively from one division, a significant number were inter-school proposals. At Antioch, in fact, 54% of the student created majors in 1968-69 and 1969-70 relied on material from more than one school. The Natural Sciences are least often part of such programs. This is due to the prerequisites and hierarchial nature of courses in most science departments. Faculty at several schools expressed a fear or skepticism of student proposals with mystical or politically radical orientations. Yet such programs were very rare at all of the nine schools.

The structure of student created concentrations was remarkably similar at each of the schools studied. No school had chosen to reserve this option for a select group such as "honors" students. Rather, any student was able to write a proposal for a concentration including in most cases, a description of the courses and independent study he planned to undertake, and, where relevant, a proposal for a senior project.

The number of courses required for a student created concentration is usually the same as that required for the average departmental major, and schools which require a senior project or examination easily fit that institution into their student created majors. At Reed, for example, the senior thesis for such students is administered and evaluated by a committee of representatives from each department involved in the student's program.

The procedure for approval of a student created major usually involves consultation with a sufficient number of people (advisors, department chairmen, prospective teachers, etc.) so that before a proposal is formally considered, it has been either discouraged or molded into a form corresponding to committee guidelines. As a result, few proposals considered by the committee are rejected or returned for student modification. At Yale, for example, sixty-four of sixty-eight student created programs proposed in 1970-71 were approved, including six initially returned for revision, while at Trinity, fifteen out of sixteen were approved.

The number of student created majors has been so small that even the administrators of each of the schools studied were surprised. Although officials at a number of schools reported that the interest in such programs had increased dramatically within the last two years, the only school studied at which more than 6% of classes of 1971 and '72 were participating in majors of their own design was Antioch.

STUDENT CREATED MAJORS; Percent of Graduating Students Enrolled

Antioch	12%	
Bowdoin	3%	
Brown	4%	
Haverford	2.5%	
Reed	4%	
Stanford	2%	(Or less--figure based on administrative estimate)
Trinity	2%	
Santa Cruz	6%	
UWGB	0%	
Yale	3.5%	

While the fact cannot be denied that these figures are much lower than many schools expected, some of them are slightly deceptive. Figures for non-traditional majors can be enlarged by the inclusion of the number of proposals rejected, ultimately unsubmitted, and undertaken within other options such as double, and pre-structured interdisciplinary majors. For example, at Haverford, the ten to twelve students in double majors, and the five or six in interdisciplinary programs, in each year's class of approximately one hundred and sixty, added to the three or four who create their own majors, yields a more substantial figure of 12.5% involved in interdisciplinary programs. Still, one Haverford administrator said there is "very little use of the flexibility available."

Although such expressions of disappointment were common among the administrators and faculty interviewed, a majority of the sample faculty had formed no opinion of student created majors, having had no experience with the program. Nevertheless, the overwhelming reaction of the faculty who had had experience with student created majors was enthusiasm for the concept and a satisfaction with all or most of the program. Professors at all schools praised the flexibility and opportunity provided for students, especially the more aggressive and self-directed. Most faculty considered the programs at least as coherent as departmental majors.

On the other hand, a few professors at each school believed work in a "discipline" was necessary. Students and faculty alike feared a negative graduate school reaction to student created majors. However, so few have been completed that an accurate assessment is not possible. Other reservations were that some students create a special major only to avoid specific requirements, and that some of the programs created could easily have been housed in one department. An opposing danger cited by several faculty was that majors would exceed the resources and expertise available at the college. While this charge was invariably denied by members of concentration approval boards, rare examples were noted, such as the Oriental Studies major at a sample school with no Oriental Studies facilities.

Student created majors, indicating large student interest in a specific area, have occasionally been the impetus for institutionalization of interdisciplinary programs. At Antioch, for example, the demand has been so great for interdepartmental majors of International Studies, Environmental Studies, Pre-Law, and Social Work that formal programs have been organized and additional professors have been hired.

In view of the positive experiences and reactions to student created majors, it is difficult to understand why so few students have employed the option. A primary factor at several schools seems to be a lack of awareness of the existence of the option. At most sample schools this ignorance was the fault of the students and their advisors, but at Bowdoin, Wesleyan, and UWGB, sample administrators, including Registrars and Deans, were unaware of the existence of this option at their school despite the inclusion of a description in the catalogue. Such descriptions alone are apparently insufficient to perpetuate a program. This maxim is well demonstrated by the history of student created majors at Brown. In 1968, when the Brown curriculum was dramatically revised, student initiated concentrations was part of the package approved by the faculty. However, the Brown catalogue had, since the late 1940's, mentioned the student created major as a permissible form of concentration. The Registrar reports that the option was not used prior to the curriculum change. Following the change, departmental requirements were reduced, made less specific, or expanded to include other options in twelve departments, yet 4% of the students chose to construct their own majors in 1969-70. In the Spring of 1971, faculty on the Curriculum Committee noted increased numbers of students created their own majors. This growth occurred despite further departmental liberalization.

A small number of students indicated abandoning their major proposal because of a lack of faculty encouragement. Several members of this group cited professors who felt a departmental major essential for study of their field. Similarly, the report by the Yale Dean of Students office warns of problems for the student with an inter-departmental major "because he is, in effect, in a program by himself (so that) he must forfeit some of the services normally provided as part of a departmental . . . major." He therefore must find his own advisors, acquire the necessary background and sustaining interest without much outside help, and often convince graduate schools and others of inherent value of a program they have never previously been presented with.

The lack of interest and occasional hostility regarding student created majors by administrators and faculty, together with the legitimate warnings publicized by schools like Yale, combine to provide a strong pressure to choose a departmental major. In addition, standing departments fulfill the needs of many students, while others, though not entirely happy with any one discipline either lack sufficient direction to choose from a limited number of departments let alone create their own concentration, or find the requirements of one department sufficiently minimal and/or flexible that they are easily completed, permitting the addition of many electives. This ease, and the associated lack of bureaucratic red tape increased the desirability of departmental majors for many sample students. This factor increased as some departments, as at Brown, loosened their requirements and/or offered formal interdisciplinary options. Yet, the departments at Antioch, where many students design their own major, offer great latitude with few specific courses required. The fact that high student involvement in such a program is found at a school with attractive departmental requirements might be attributed to Antioch's policy of seeking students "who are ready to assume responsibility for their own lives . . . and for their own learning." (1970-71 Catalogue; page 192), accordingly drawing a more independent and self-directed student body. This unique-student hypothesis is strengthened by the presence of a work-study program which causes the students to work independently for one half of college years. This uniqueness of both the Antioch student and program helps explain the much higher incidence of student created majors at Antioch than at other sample schools.

REQUIRED STUDENT CREATED MAJORS

Upon reaching the junior year all Justin Morrill students are expected to choose a faculty member to serve as a concentration advisor and assist the student in planning a major program. The concentration can be either of departmental or interdepartmental nature, and may be anything meeting certain credit requirements which a faculty member will sign. In recent years, 40-50% of the majors have been standard departmental concentrations, while others have closely resembled them.

Such a program forces each student to address the question of what he wants to learn in college, encourages the planning of programs rather than mere enrollment in random courses, currently the rule within many departments, and is compatible with the prevalent disciplinary organization of the faculty. On the other hand, such a program in schools lacking Justin Morrill's enormous faculty-student contact time would experience the same difficulties found in advising systems. (See Advising). In addition, a faculty review board designed to maintain academic quality, usually included in student created major programs, would become very costly, requiring an enormous commitment of faculty time. The omission of such a board, however, enhances the possibility of all the potential problems attributed to student created majors.

NO MAJOR AND CONTRACTS

Three schools not having concentration programs were studied. One of them, discussed at length under General Eeucation, is St. John's College which requires a common four years general education program for all students. The other two, Sarah Lawrence and New College, are more conventional in orientation.

Sarah Lawrence has no formal mechanism to allow students to concentrate and, in fact, attempts to enforce breadth by requiring students to take each of their three courses each term in a different department. Juniors and Seniors are permitted, with the perfunctory permission of a committee, to take a "two-thirds program" with two courses in the same field. In fact, students may not specialize as much as they do elsewhere since, in 1971, the following number of students had opted for a two-thirds program.

NUMBER AND PERCENT OF SARAH LAWRENCE STUDENTS TAKING TWO-THIRDS PROGRAM

	Number of Students in Class	Number Taking 2/3 Program	Percent Taking 2/3 Program
Junior	157	30	19%
Senior	125	60	48%

Nevertheless, it is possible to achieve the equivalent of a traditional major by taking a course each semester in one department. Although these figures were not available, most faculty members interviewd estimated that between 50-75% of the students graduated with a major, while approximately two-thirds of the students in the sample planned to graduate with a major.

All but one professor felt the lack of majors was a good idea not adversely affecting students interested in graduate school, while this professor felt Sarah Lawrence provided insufficient background for graduate school.

A significant number of students, however, indicated problems with not having a major. Over one-third of the students planning to concentrate felt they would be at a disadvantage because of the absence of official majoring. Several students interested in psychology, theatre, and English said they were going to another school for at least one year to take the programs they thought they needed for graduate school. While this problem, felt by one-fifth of the sample is serious and should be investigated, it must be remembered that a significant contributing factor to thesituation may also be the limited faculty size and course offerings available at Sarah Lawrence, which necessarily cause gaps in the curriculum.

An even more novel approach to concentration and course selection is the contract system adopted at New College in 1969. The College abolished official majoring and substituted an option to work under a contract each term. Students were given the choice of declaring a major, and of the seventy 1971 graduates, thirty-one had done so. Since some of the students were carried over from the old program when a qualifying exam was required, the College Recorder felt the number of students declaring a major would drop.

It should be noted that despite the novelty of concentration at Sarah Lawrence and New College, and some student and faculty fears, neither school has experienced any difficulty in having its students admitted to excellent graduate schools.

COMPREHENSIVE EXAMINATIONS AND SENIOR YEAR

CREDIT BY EXAM

Minor efforts have been made by colleges to deal with the varied educational backgrounds and learning rates of undergraduates. One program permits students to receive credit for prior knowledge that corresponds to university course offerings.

The most simple instance of such a program is at the University of California, Santa Cruz where, as an extension of the arrangements many colleges have to exempt proficient students from language and distribution requirements, a student may petition to obtain credit for any course if he feels he has mastered the material. The course instructor must approve the petition and administer an examination.

Administrators said the option has not been as popular as anticipated; however, the Registrar's office showed it to be frequently used. During 1970-71, "approximately two hundred and twenty-five students," or 7% of the student body used the option to obtain course credit by examination for at least one course.

At Florida Presbyterian College, Credit by Exam is supplemented by a program of "Directed Studies" which gives prepared syllabi for certain courses to students when they are unable to attend the course; when summer vacationing, when involved in study abroad, when the course is not being offered, or when the student has a time conflict. Because a syllabus must be prepared, the program is only available for specific courses. In 1970-71, thirty-six Directed Studies courses were available.

A professor is responsible for students taking one of his Directed Study courses and he must be available for advising (in some cases, written) and the administration and review of papers and exams. The only problem noted concerning Directed Studies was that some faculty members sponsor too many students each term so that they are unable to provide adequate advice or paper supervision.

The final such offering studied was the Self-Achievement Program sponsored by the Experimental College at Tufts University. This program is intended for students who feel they can better master the material of a course outside the class with the help of a professor, than in the classroom. Thus, students who have had difficulty with math, for example, have used this option, rather than the course, to move more slowly and emphasize troublesome areas. A student in the Self-Achievement program works with a professor and must pass an exam. The program attracted only eight students in its first year, 1969-70.

COMPREHENSIVE EXAMINATIONS

For the purposes of this section, a comprehensive examination will be defined as a written or oral test which is administered universally to the members of one academic year. Comprehensive exams were studied at Bard, Haverford, Reed, St. John's, Santa Cruz, and New College--schools representing a spectrum ranging from the classical to the innovative curricula.

SOPHOMORE EXAMINATIONS

A few schools have felt a need for a rite of passage between freshman and sophomore years of general education, and the junior and senior years of specialization. Bard College, for example, divides its program into an "Upper" and "Lower" college with a "moderation" exam required for transition. Moderation consists of a student self assessment through a required paper, academic tasks required by some departments, and an oral defense before a faculty board of three from the division in which the student desires to concentrate. The Moderation is held during the sophomore year to determine whether the division will accept the student as a major. A student failing Moderation must apply to moderate in a different division; he may not choose a different major option within the division. About 10% of the students fail Moderation on the first attempt.

Bard's faculty were more positive regarding the Moderation, at least in theory, than were its students. About 80% of the faculty praised the concept of providing students with a needed period of introspection, although many indicated a feeling that the Moderation had deteriorated over the years, and at least one division had undertaken a faculty survey to re-evaluate it. Only a small number of faculty felt it created undue anxiety, although several indicated that it was very difficult for transfer students.

Less than one-third of Bard's students were happy with the practice of Moderation, although like the faculty, a significant number were enthusiastic about the concept. Similarly, less than one-third of those who had already experienced the Moderation had found it valuable. Students felt that divisions had different goals and employed different practices. For example, all the students who had taken the Moderation in one division said it was impossible to fail while all those in another said it was used by their division to cut down its oversubscription. In addition, several students indicated that the ease of Moderation depended as much upon who was on the panel as in what division the Moderation occurred,

One often-expressed fear concerning ordeals such as Moderation is that great, and implicitly harmful, anxiety will be created as the students worry about failing. At Bard, 40% of the sample, when asked, indicated such feelings.

St. John's College employs a similar procedure called Sophomore Enabling. Sophomore Enabling is a review, conducted by the Instruction Committee, of the student's first two years at the college, after which a decision is made regarding his continuing at the college. Decisions fall within three categories: the student is "enabled". i.e., becomes a junior; the student is told specific work he must do to be enabled; or he is not enabled and asked to leave. All sophomores write an essay summarizing what they have learned and this, according to the catalogue, is a major part of enabling.

Because St. John's, unlike Bard, requires its students to meet individually with all their professors each term (see GRADING), Sophomore Enabling was not considered as unique as Moderation was at Bard. Nevertheless, faculty and student reactions were not dissimilar, with faculty at St. John's thinking it was a good idea while students had very mixed feelings. The anxiety caused by Enabling was somewhat greater than that encountered at Bard, since many students reported having no idea what was being examined, how to prepare for it, nor on what basis judgements were made.

Both St. John's and Bard combined the potentially worthwhile idea of requiring students to examine where they've been and where they're going with the somewhat tired structure of a comprehensive exam with its judgements of success and failure. Thus, the important issues of what a student learns and what he wants to do with it are made subsidiary to passing. A school which dealt with this more successfully, however, was Haverford College.

At the end of the freshman year, each Haverford student meets with a panel of faculty and seniors to discuss the student's general education program and future plans. The panel is charged with making advisory reccomendations for the student, including further studies if necessary. (See ADVISING for an in depth study of Haverford's approach.)

The final college studied with a sophomore exam was New College, which at the entrance of its charter class required passage of a qualifying exam to enter each department as a major. Because each department treated the exam so differently, the requirement was dropped in 1970, after six years, and the exam was left as an option to each department. Only two departments, Biology and Mathematics, chose to continue it.

JUNIOR EXAMINATIONS

Reed College imposes a junior qualifying exam to ascertain each student's ability to write the required senior thesis. Each student is given two chances to pass this exam, after which he is denied the opportunity to continue in that department. Exams for students pursuing interdisciplinary majors are tailor-made by the sponsoring faculty.

The qualifying exam has become less difficult in recent years. The Registrar reported a past failure rate of 15% and a current failure rate of 3 or 4%. This decrease is partly due to the efforts of some departments, which, after a student fails once, go over his weaknesses with him and tutor him for several weeks until he can pass the second time.

Like most of the exams mentioned, Reed's aroused little enthusiasm from students and only theoretical praise from instructors. The faculty were divided largely between those who felt the exam had symbolic value as a final barrier, and those who thought it was a meaningless ritual, while only a small humber thought the exam was a useful review of the first three years. While some professors thought the exam was very difficult and required much preparation, all the members of the sample acknowledged that the fear of failure was no longer a significant factor.

Students were united in their lack of strong feeling for the junior qualifying exam. All but one sample member felt no real pressure or anxiety with regard to it, and no one seemed to feel that it was an onerous intrusion upon their lives. Similarly, all but one of the seniors interviewed found little benefit in the actual functioning of the institution.

SENIOR YEAR EXAMINATIONS

Some colleges require a comprehensive exam in the senior year. Each of the three schools studied employing this device administer the exam through the student's major. At Reed, for example, seniors, before graduation are required to take a two hour oral exam based on their college experience, but focusing on the thesis and senior year work. Although students and faculty were not asked about this, the Registrar explained that the exams are used to tie together the college experience and, as no one has failed in many years, they have become only a psychological hurdle.

One of the few original requirements New College has maintained is a senior exam called the Baccalaureate. A committee of the student's professors, two students, and the senior project advisor administrate the Baccalaureate exam. The form of the exam is determined by the individual committees, although the purpose is generally to review each student's work and senior project. Associated with a very low failure rate was a lack of apprehension by students.

The final examination to be discussed is that given by Santa Cruz where every senior must pass a comprehensive administered by his Board of Study (department). The exam may be written, oral, a combination of both, or, in some cases, a thesis. The Registrar reported that approximately 10% had chosen to write a thesis each year, although it was felt this number had been rising. Each Board sets its own policy. A student working under an interdisciplinary major receives an exam created by his advisors while students with double majors generally take two exams. The exams are graded honors/pass/fail, and those who fail must repeat the exam. Two failures may keep a student from graduating. Exam formations vary by subject area. For example, students in the fine arts must assemble a one-man show, while those in the sciences must engage in research activities, and those in literature must take a test based on a list of thirty to forty books.

Faculty and students both liked the idea of the exam although a significant number of the students expressed a lack of information regarding its workings. The major strength cited was that it helps students synthesize what they have learned. Weaknesses noted by both students and faculty were that the exam is administered with varying degrees of seriousness in different departments, and that some anxiety is created prior to the exam. Fifteen percent of the sample students expressed this fear. In addition, some students felt the requirement was a burden which did not provide a sufficient reward.

SENIOR PROJECTS

Senior projects were studied at Bard, Reed, and New College.

Bard College requires each student to complete a senior project which accounts for one course each semester of senior year. The nature of the project varies from division to division, i.e., from an artistic project, to laboratory research, to translation of a foreign work, to the topically oriented evaluatory, analytical or critical long paper. The topic for the senior project must in theory be approved by the division faculty, though in fact, the job is lodged largely with the student's advisor. The analysis of the completed project by the division includes, as did the comprehensive, an oral examination before a faculty board.

The senior project is by far the most popular feature of the Bard curriculum. Over three-fourths of the students, and a large majority of the faculty expressed enthusiasm for the project. Aspects of the project which received praise, were the close contact between students and faculty, the opportunity provided for independent study, and the psychological benefit resulting from such a project. The last factor was emphasized by professors who said senior projects had imparted a sense of confidence to many students, and by students who indicated the work they had been able to do for a project had made important changes in their self-image. Students felt no anxiety toward the senior project, although 40% of the same Bard sample had expressed anxiety concerning the Moderation previously discussed.

At New College, one quarter of each student's last year is devoted to preparing a thesis in his major field. (Due to the abolition of required concentration, this requirement will be changed.) Because a great stress is placed upon independent study at New College, requiring that students complete a certain number of independent study projects, the senior project did not provide the same breath of fresh air it did at Bard. Students and faculty were pleased with it, but it was simply considered as an extended independent study project.

The thesis at Reed College, however, received the same overwhelming enthusiasm as was noted at Bard. The program is structured and administered similarly at the two schools, although the Reed administration seemed to regard it as an even more central part of the curriculum. The quality of work produced is apparently so high, and so often cited, that a small number of students expressed fear of being equal to the task. Several theses each year have been published in professional journals, and the requirement is considered a sufficiently integral part of the senior year that 6% of the student sample felt it had been a significant factor in their decisions to either finish all four years or to return after having dropped out.

The faculty and students thought the senior thesis was an excellent idea which was well administered and properly responded to by all. Many said it was the best part of the Reed curriculum. The members of the student sample already working on their theses expressed unqualified enthusiasm while most other students were looking forward to beginning the thesis.

SENIOR SEMINARS

The senior seminar, like the senior thesis and comprehensive, seeks to provide a useful culmination to the senior year, however the seminar utilizes a common senior sharing experience to replace the individual achievement and testing atmospheres characterizing the other methods. The programs studied at Bowdoin, Justin-Morrill, and New College all try to constitute the senior year as more than a moratorium in which to haphazardly look back at past exploits and to timidly make plans for the future, by attempting to engender a synthesis of student experiences and a sense of the wholeness of knowledge.

An effort to have senior seminars at New College has already been abandoned. The college's plan was to devote the first and third years to diversified course work, and the second to a major. One element of the third year program was to be the senior seminars which were to be interdisciplinary offerings.

In 1968, the seminar was dropped because, according to New College Institutional Self Study, 1970, by the senior year, students were already too specialized for interdisciplinary work. It was also found impossible to locate and organize a "uniform and relevant" program.

Similarly, a senior seminar program at Justin Morrill College, structured as an interdisciplinary, team-taught course, has been remodeled, owing to student dissatisfaction and the excessive costs inherent in team teaching. Currently, the seminar program reintroduced in Fall '70 is a more modest undertaking with three or four sections (per semester) each taught by individual faculty, for the two hundred seniors.

Bowdoin College has made one of the most comprehensive attempts in the country to reexamine and rebuild the senior year, far surpassing the more limited efforts of the other two schools. In 1964, Bowdoin opened a Senior Center and began a program of senior seminars.

The suggested structure of the seminars, which professors are encouraged to experiment with, is to have a few weeks of class meetings at the start of the term, then a lengthy period in which each student works on a topic-related project, either individually or as part of a group, and then further class meetings at the end to try to learn from each other and tie together what was learned. Coordination of seminars is achieved through staff meetings occurring twice a semester. Seminars are limited in size to fifteen, although each year a few have been larger. Despite the use of four and five point grading systems in the College, the seminars have, since their inception, been graded on an Honors/Pass/Fail basis, in an effort to lessen student's fear of leaving the discipline in which they felt secure.

All faculty are approached to teach in the program, and, through "gentle persuasion and arm-twisting' twenty to twenty-five seminars are mounted each year for the two hundred and thirty seniors. Faculty must obtain departmental permission to participate in the seminar since the course counts as part of their teaching load and is financed by their department. The Director of the Seminar Program said he had had good cooperation from the faculty, and professors from all departments have participated.

From the start of the Seminar Program in 1964 through the Spring of 1970, full professors had, surprisingly, formed the largest contingent in the volunteer teaching staff. In that same period, professors from the humanities were 38% of the program staff, while social scientists accounted for 32%, and scientists and mathematicians provided 27%. Since several science faculty presented seminars on non-science topics, an occurrance not reciprocated by the other professors, the percentage of science seminars offered is somewhat less than 27% of the total.

Students sign up for seminars by listing their first three choices, and are placed on a first come-first served basis. Students have been asked to suggest seminar topics but, to date, there has been little response, although the effort has not been abandoned.

When the program started, seniors were required to take one seminar each semester. In 1967, the requirement was reduced to one seminar during the year, and in 1970 the requirement was dropped. During the period from 1967 to 1970, when one seminar was required, approximately two-thirds of the seniors took two seminars. In the first year following the elimination of any seminar requirement, 89% of the seniors took at least one seminar.

Members of the sample were asked their opinion of the strengths, weaknesses, and overall value of the seminar in which they had participated. Almost half of the students, 49%, had a positive reaction to the course (19% were highly enthusiastic,)16% were negative, and 35% were neutral or had no opinion. All the faculty interviewed felt positively toward their seminr experience.

The strengh mentioned most frequently by students was structure of the seminar. Students appreciated both the loose, informal nature of the course, and the opportunity provided for freedom and independent study. Most interestingly, only one student mentioned finding value in the opportunity provided to view another field. The quality of the instructor was the most frequently cited factor affecting seminars, and it was listed as a weakness twice as often as it was a strength. Other frequently mentioned weaknesses were the lack of participation by seminar members, the assumption by the instructor of too much student background, and the lack of academic substance in the seminars.

Faculty more often than students favored the program on the basis of its philosophical foundation. Thus, groups of professors felt the seminar was valuable for affording an opportunity for students and instructors to deal with subjects not part of their discipline. 70% of the faculty said teaching the seminar was a great experience, and 42% mentioned the excitement they felt in getting non-majors interested in a subject. Faculty members also felt the seminar provided highly motivated students because they emphasize topics of student interest. Similarly, several professors noted enhanced faculty motivation owing to volunteer faculty involvement and utilization of seminar topics of high faculty interest. Science topics, however, were considered difficult to transmit to non-science students. Faculty felt seminars were harder to teach than other courses the first year, and easier thereafter.

Students overwhelmingly felt subject matter was the major reason for enrollment in specific seminars. However, a majority of students felt seminars would be no less valuable for sophomores, juniors, or seniors.

Although students are generally not permitted to take seminars in their specific major area, it is significant that 55% of the students enrolled in seminars whose subject was outside their school. On the following page is a list of seminars offered in the Fall term, 1970, well representing the nature of topics offered in the seminar program.

Science, Technology, and Society
Fifth Centure B.C. Athens: A Century of Greatness?*
The Musical Avant-Garde, Old and New*
The American Revolution*
Political Institutions and Social Change: Recent American and British Experience*
Memory*
The Art of Color*
Strategies for Games*
Friedrich Nietzsche: A Problematic Figure of our Time
Environmental Decision-making: The Citizen's Role in Land Use Planning in Maine
The Artist as Philosopher*
Herman Melville*
The Literary Work of Herman Hesse, the Steppenwolf*
Modern Architecture and Urban Planning*
Don Quijote de la Mancha
Elementrophy
Seminar on Drugs

*Seminars excluding students with majors in related fields.

An important aspect of the Senior Seminar Program is that some of the seminars have been used by faculty as experiments to test a possible departmental course offering. Thus, a senior seminar in 1966 on "Africa: The Politics of Development" became a freshman course in 1967. Similar experiences occurred with numerous other seminars. But, more importantly, faculty indicated using the seminars as a laboratory to experiment with new teaching methodologies, which many brought back to the departmental classroom.

The most significant feature of the Bowdoin seminars is their inclusion in a comprehensive senior program housed in a senior center. The Center is a small complex of dormitories with facilities to house the senior class and a small number of faculty. The Center contains a dining room, guest apartments, and recreational and common rooms, and is used almost exclusively by the senior class. The exceptions are generally public events open to the entire college. Activities taking place in the Senior Center include concerts, lectures, some classes, and many of the senior seminars.

The Senior Center has an annual budget of $35,000 to $40,000 which pays visiting lecturers, student employment, secretary salaries, and travel allotments. If the cost of the faculty time, which is absorbed by the departments, is included, the budget is close to $100,000 and even this figure ignores the maintenance of the Center.

The Director of the Center, in his annual report, indicated that while senior seminars are the largest "single element of course" with limited enrollments, they may not be as necessary as they were in 1964. Now there are more small classes in the curriculum, there are more opportunities for independent study elsewhere, and the freshmen and sophomore distribution courses which the seminars were intended to compliment, no longer exist.

It is immediately clear that the Center has provided a large number of seminars which, for many seniors and faculty, have been a rewarding experience. In addition, the Center has offered many cultural and other non-credit activities which have been well received. Also, the Center has given all seniors the chance to live together, which seems to be an accomplishment of dubious value.

The Center has also made Bowdoin more receptive to innovation. Although the College had been considered by its constituents, as well as by outsiders, to be somewhat conservative academically before the Center was started, Bowdoin has since that time made a number of changes which have destroyed that reputation. For example, the College loosened its grading system shortly, but significantly before such changes became common place. It also has a number of interdisciplinary course offerings which, while not a great number, is more than colleges of greater size offer. Also, the fact that students can create their own majors, though few people do so, must be considered an innovation of note.

While it can be suggested that these changes are attributable to the temper of the time, it seems that would be unfair. For Bowdoin has shown an interest in its students and in different forms of learning emanating from the presence of one innovative program which has provided a good example by not failing. That program, the Senior Program, has been far from a total success, and it has not, through its own offerings, radically changed Bowdoin, yet it seems to have created, or perhaps only focused, an awareness of the necessity of regulating and revising academic programs.

EXTRA-DEPARTMENTAL CURRICULAR INPUTS

Departmental structure has not been able to incorporate non-traditional learning formats into the conventional curricula. Therefore, some colleges have loosened or changed the organization of their faculty and/or departments to include such programs. (see CONCENTRATION) Other schools have created supplementary structures to sponsor offerings which are frequently not faculty taught, strictly disciplinary, nor course oriented. This chapter will examine these extra-departmental structures.

UNIVERSITY COURSES

The university course is an extra-departmental structure, designed primarily for juniors and seniors though in practice including the entire undergraduate student body, created with the intent of broadening the very narrow experience encountered by students in departmental majors. University course programs were examined at Brown and Trinity.

Each year since 1969 faculty at Trinity have offered a number of interdisciplinary courses outside the departmental structure, called College Courses. In 1970-71, four such courses were given in the Fall term and an additional course was given in the Spring. The five courses enrolled 136 students while 458 had been enrolled the previous year. The size differences can be attributed to a cut-back in the number of courses.

Any faculty member may teach one College Course per year as a fourth course without departmental approval, or as a thrid course with departmental approval. Faculty indicated that most departments are unenthusiastic about the concept of college courses, and since no other tangible incentive is provided, it is not surprising that so few professors volunteered and that only one who did was junior. Opinion regarding the courses, from the small number of participants interviewed, varied markedly even in the same course. The faculty sample expressed little interest in, or knowledge of the program, while several students noted that the courses were overcrowded.

University Courses at Brown have been equally disappointing. These existed well before the 1969 curricular change, but the Maeder report had proposed considerably expanding the number of offerings, then six, to the level and nature suggested for third tier courses in the Magaziner Report. (The Maeder report, essentially a faculty evaluation of the student written Magaziner report, provided the framework for the 1969 curricular change at Brown.) Yet only 14 such courses, taught by 9 faculty, were offered in 1969-70. Three were given by Brown's University Professor, the only member of the Brown faculty with no departmental affiliation.

University Course topics f r 1969-70 were:
Modes of Experience: Science, History, Philosophy, and the Arts
Conceptions of Man: Diversity and Coherence
Between Man and Man
The Earth as Man's Abode
Technology and the Moral Order
Introduction to Cinema

Film History and Theory
Sociological Study of a University Student Environment
Urban Design Studio: A Case History
The Role of Science in Civilization
The Informative Way of Life
History of Materials: Technology and Culture
Technology and the City
Morphology-A Study of Form in Human Experience

Although most faculty participants had found their experiences to be positive and indicated they had learned a great deal, their conceptions of what the program should be varied considerably, with several noting that they used the course as a laboratory to try new techniques and teaching styles. The only consistent complaint made was that students demanded more structure to the extent that one faculty member said he was forced to return to a "regular course format."

The other faculty in the sample were asked why they had not participated in the program. The vast majority merely indicated a lack of interest, although several said it would also be an additional course to teach. No department encouragement was noted by any faculty member, though several noted a passive attitude.

Although few students in the sample had been involved with University Courses, their reactions, like those of the Trinity students, were extremely varied. The coherence and philosophy of an entire program was in no way apparent, which is to say that each course emerged as a separate entity. The only criticism lodged with any frequency was that so few University Courses are offered that classes are overcrowded and many students are excluded.

The class formats varied as much as the recorded comments, ranging from a standard faculty lecture to a student structured and lead seminar. Given this information it would clearly be impossible to complete an evaluation since there is no clearly defined program in practice.

The very existence of an extra-departmental program at the University of California, Santa Cruz, would seem unnecessary because the encouragement of interdisciplinary work has been such a central concern of the planners of its curriculum and faculty structure. For example, the Provost of one Santa Cruz college estimated that 10% of the University's courses are interdisciplinary in the sense that they couldn't be offered within the confines of one department, and some of these are taught by more than one professor, often from different divisions.

Yet, despite this figure which, comparatively at least, is quite impressive, several of the colleges at Santa Cruz have created structures to further facilitate interdisciplinary courses. Stevenson College, for example, offers college seminars which study specific cross-disciplinary topics in depth and Crown, the college emphasizing the natural sciences, offers optional senior seminars with topics "often chosen to illustrate and to explore the inter-relations between scientific and non-scientific disciplines." The Crown senior seminars offered in 1970-71 were:

*The Problem of the Pollution of Air and Water
*The Phenomenon of Man
*Ecology
Organization Climate: Philosophy and Ecology
[1]Governance and Management
Science Fiction
Heredity, Evolution , and Society
The Quest for Enlightenment
Human Biology
*Environmental Influences on Human Characteristics
The Visual Arts
Interdependence in the Atlantic Community
Technology and Community
Frontiers of Knowledge in the Light of Modern Physics

* indicates course taught by professors from different Boards of Study (departments).

[1] indicates course taught by professor and administrator.

OPEN-ENDED EXTRA-DEPARTMENTAL COURSE PROGRAMS

The extra-departmental open-ended course programs, as discussed in this section, are groups of non-departmental and inter-departmental courses prepared for individual students, groups of students, or groups composed of students, faculty, administrators, and community people. In each case, these courses were chosen by an extra-departmental student-faculty committee from suggestions submitted by its constituency. Such programs were studied at Brandeis, Yale, Stanford, and Tufts. Brandeis offers the simplest program, providing only a handful of traditional courses. Tufts is the largest program going far beyond single course formats in its offerings. The additional structures examined at Tufts provide the context for supplental study of ad hoc programs, such as independent study and multiple course unit groupings at other colleges.

The Flexible Curriculum Program at Brandeis is administered by a student-faculty committee, though final approval lies with the Dean of Faculty's office which has occasionally vetoed controversial courses. The program has been successful in having their courses picked up by departments. Four Flexible Curriculum courses were subsequently offered by departments, which is particularly significant since only half of the participating faculty have been members of the regular Brandeis faculty. One course, "The Biology of Man", was even picked up by a department after approval by the Flexible Curriculum Committee, but before it was given.

The number of student and faculty suggestions have been few, no more than ten in any term. The courses have, however, been well attended with size limits imposed in several instances. The program has occasionally been used by students, in the words of the Dean of Faculty, "to do their radical thing." In one instance, a student leader sitting on the Committee suggested a course taught by a controversial professor whose contract was not being renewed, and in another instance, a student group tried to use the Committee to pass a number of courses comprised in an experimental college program which the regular curriculum committee would not consider. Otherwise, as felt by most and again verbalized by the Dean of Faculty, the Committee "functioned only routinely."

Yale University's program to sponsor non-departmental courses is of much greater magnitude than any of those previously discussed. Since 1968, the school has offered a program of Residential College Seminars, given with full course credit and organized within each of Yale's twelve residential colleges. The courses are each limited to fifteen students, with most between twelve and fifteen. Courses can be repeated no more than twice, and by 1970-71, 150 seminars were being offered each year of more than 200 proposed.

The seminars were established not only to provide an educational output for the colleges, but also to provide a structure to accommodate course experimentation and immediate demands for presentation of specific material. Students from the sponsoring college are given preference, but all students are eligible for all seminars.

The Yale College Course Study Committee must approve all seminars. The courses, suggested by students or faculty, must also receive the approval of the appropriate departments, the College's senior fellows committee, and perfunctorily the faculty. One Committee member said the Committee often screens courses to insure faculty approval and maintain the Committee's good reputation. Most of the seminar leaders are from Yale, although many have infrequently taught undergraduates. The non-Yale teachers have included several "big names" such as Jonathon Kozol, Arthur Miller, and Vincent Canby.

Each residential college has a budget of approximately $22,000 from which departments are repaid $1500 to $2000 for each professor's time. Although departments are generally cooperative, the program's Director said some fight not to give up their professors. He said, however, that there is a general acceptance and, in many cases, imitation of the seminars within departments.

One of the purposes intended for the seminars was to test run courses for adoption by the departments. This has been successful for many courses including "Creative Writing," "Art," "Afro-American Studies," "Urban Studies," "Environmental Studies," "Hebrew," and "Literature." One problem with this however, according to a report in the Yale Daily News, is that some departments have adopted an attitude that they need make little effort to accommodate student suggestions for innovation since the student can go to the Residential College Seminars (RCS).

Faculty were asked why they had taught a seminar. Only one said his department chairman had asked him, while the rest were split evenly between those who had volunteered to teach a subject of special interest and those who had been asked to teach a specific course by students. Those who had volunteered from their own initiative did so because their course couldn't be taught in their department, they liked the idea of college seminars and wanted to participate, or they wanted to teach freshmen and sophomores (which they usually couldn't). The topics students had asked professors to teach differed little from those the other professors had designed. They ranged from "Ecology," "The Philosophy of Science," and "Genetic Manipulation" to "University Protest" and "Broadcasting for Social Purposes."

The seminars are all structured in the same manner. They meet for about three hours a week, either in one or two meetings, and most require a paper and/or project. Many have each student acquaint himself with a particular aspect of the topic and give an oral presentation to the class while some combine field work with classroom activity. One seminar had five professors from varied fields eat lunch with ten students each week and discuss their current research and interests.

One third of the faculty sample taught the seminar in addition to their other course work. Many of the others said their department encouraged them to teach seminars because it gave the department a "good image" outside its usual constituency, and several professors indicating a problem peculiar to few colleges, said their departments were so over-staffed that their time was their own.

Both professors and students were overwhelmingly enthusiastic about their experiences with the Residential College Seminars. 85% of the faculty sample expressed a positive reaction and no one felt completely negative. Students, as reported in Yale's Course Critique, were equally enthusiastic. Rating all courses on a six point scale, 30% of the seminars were rated five or more, placing the RCS at the top of Yale's other departments. The strengths mentioned by professors focused on the structure of the seminars, the material and the teaching experience obtained.

One strength mentioned or implied by most was that teaching a Residental College Seminar was fun.

The strengths mentioned by students were the high level of discussion and the emphasis on individuality, freedom and flexibility.

Most weaknesses mentioned by professors were expressed in terms of things the professor would change after his first experience with the seminar. These included professors who, in the future, would teach students with more structure or less breadth. An example of one professor who learned from his seminar was a man who offered a superficial survey of all natural sciences, which he found too broad. Since his students particularly enjoyed the section on relativity, he planned to devote a whole seminar to that the following year.

Weaknesses mentioned by students were poor planning in some seminars, the many hurdles to course approval, and the occasional variation in the student and the professor's concept of the course. An example in this last category was a seminar entitled "Is a Just War Possible" about the Pelopenessian War, which students had expected to be more contemporary.

Stanford University employs a number of structures to initiate non-departmental courses. Its oldest program, established in 1964, is Undergraduate Special Courses, which is intended to provide three types of offerings:

"1. Courses offered to undergraduates by members of the graduate and professional schools.

2. Experimental, inter-disciplinary, and other innovative courses which professors find easier to offer outside their department.

3. Student initiated courses which, while suggested by students and often designed by students with a professor, are usually taught by a professor."

Students may take up to twelve Undergraduate Special Courses, or 36 credits, whichever is less, during the four years.

The courses offered vary greatly. Courses given in one term of 1970-71 included, for example, Masters of 20th Century Architecture; Economics of Health; Math and Science for Non-Scientists; Modern Hebrew; Legal Problems of Campus Unrest; Helping High School Students Learn by Inquiry; Roots of Zen.

The number of courses offered and the number of students enrolling has mushroomed which may be an indication of the program's success since participation for both students and faculty is voluntary and without departmental incentives and compensation.

UNDERGRADUATE SPECIALS	Number of Courses	Number of Student Participants	Average Class Size
1965-66	14	208	15
1966-67	34	602	18
1967-68	99	1947	20
1968-69	100	2193	22
1969-70	124	3503	28

A second non-departmental program offering courses is the Stanford Workshops on Political and Social Issues (SWOPSI). This was organized during the summer of 1969 to attempt to turn the college curriculum "more directly toward urgent social and political problems ..." The program hopes to affect the University in general and the residents of the surrounding communities, as well as the participants in each workshop.

SWOPSI is student led and presents primarily student-initiated courses, although not student-taught. The courses are open to anyone, although only undergraduates receive course credit. In SWOPSI's first term ten courses were offered on topics such as "Air Pollution in the Bay Area," "California Logging Policy," "Delivery of Health Services," "University Research Policy," and "Disarmament Negotiations." Despite the inclusion of the last topic, the program attempts to sponsor courses on issues which can be studied first hand.

The program has grown and offered eighteen workshops in its second quarter, twenty-two in the Fall of '70 and twenty-seven in the Winter of '70-71.

Most of the workshops combine weekly seminar meetings with much independent research. Most are graded pass/fail and each is provided with a small budget for expenses, although larger sums are available for workshops wishing, for example, to publish a report. Several of the inaugural workshops released lengthy reports which were credited with influencing specific local and state-wide policy decisions.

Seventy percent of SWOPSI's first year operating expenses of $10,000 were provided by a Ford Foundation grant while its second year budget of $12,000 was provided by a Ford sponsored University "Innovation Fund."

Stanford's third non-departmental forum is the Student Center for Innovation in Research and Education (SCIRE), designed to be a "facilitating mechanism for educational projects specifically designed to respond to student proposals." (Catalogue). It was proposed by Stanford's student government and established for a one-year experiment in 1970-71. It is considered a formal subcommittee of the Committee on Undergraduate Studies and has the power to grant limited amounts of credit (27 credits per student) for individual and group projects. SCIRE is governed by a student-faculty board, requiring a two-thirds majority for most decisions, and administered by a half-time director, part-time assistant, and full-time secretary.

SCIRE's most significant facet is that the impetus for any project must originate from a student. The student must approach SCIRE's governing board with a proposal for a project or course, and the board offers advice and decides if, and how much credit should be given. If the board approves a proposal, the student must find a faculty advisor.

In SCIRE's first three quarters of operation, it received 47 proposals and approved 34. Approved were 12 individual and 22 group projects which together enrolled 333 students. The proposals not approved are often referred to a department, SWOPSI, or the Undergraduate Specials, so that of the 13 turned down, 6 were immediately offered elsewhere and two were to be resubmitted. The method of grading is decided by each instructor, and about one-half used letters and half pass/fail. From a small questionnaire return, the board was able to make several conclusions. All students and faculty attracted to the program felt they would participate again in SCIRE and few had previously enrolled in one of the University's other distinctive programs. Also, of the program's first fourteen offerings, seven appeared to be successful in terms of traditional course criteria, and two were just individual directed studies which, while leaving a substantial number of failures, is a good average for an experimental program.

SCIRE's other function in its first year was to be a clearinghouse for information regarding any seemingly distinctive academic program or course at, or near Stanford. In this capacity, SCIRE managed to temporarily adopt two other student-initiated programs. One part of the clearinghouse function is the "Friends of the Center." This is a list of the 134 members of the 600 member faculty who responded to a questionnaire asking what types of student-initiated programs they would be interested in advising, either formally or informally. Another example of SCIRE's compendium of information is a "Paper Bank". It began to bring together students who have written papers with alumni and other outside professionals who volunteer to comment on papers sent to them. This gives a student more feedback on a paper than just his professor's reaction.

The types of projects SCIRE has offered is indicated by the list from the Fall, 1970

Individual:

- FM Station Research
- The Municipal Executive: A Case Study of Sacramento
- Research in the Chemistry of Ceramic Glazes
- Research in Environmental Law and Water Law
- Real Estate Syndication

Group:

- First Year Bengali
- Alternative: Community
- Poverty and Law
- The Alienated Student: A Case Study
- Suicide: Community Context and Suicide Prevention
- Field Methods in Community Development

Group:

Guyana Queh-Queh Dance

Satyagraha: Non-Violence and the Spirit

The Police: A Closer Look

Branner Section--Stanford Pottery Workshop

Difficulties had arisen in SCIRE for which no solution had yet emerged. The major problem was the "disappointing" number of proposals received despite a comprehensive publicity effort.

Another problem was the determination of SCIRE's place among the similar Stanford programs. SCIRE's claim to distinction is that it offers not only student designed courses (like SWOPSI) and not only student designed programs (available through Inter-School Majors), but a place where a student can design both a program and its components. Especially since SCIRE makes it possible for a student to create his own program with his own courses, however, few departments would allow more than three of SCIRE's courses to be used for a formal concentration program.

SCIRE's budget for its first year was $18,000 which came from a Ford Foundation grant. For the second year, its proposed budget was $24,000, all of which was to come from the university:

Staff--Full time Director, Administrative Assistant, Part time Secretary - $17,000
Equipment -$2,200
Projects--Travel, postage, printing of questionnaires and reports, etc. - $5,000

The most ambitious program studied to provide additional inputs to the curriculum is the Experimental College at Tufts University. While this "college" has a wide range of offerings, it differs from the Residential College at the University of Michigan or Justin Morrill College at Michigan State University, for example, in that it cannot exempt a student from University requirements or substitute for a major. There are not, therefore, "Experimental College students" at Tufts, rather all students may avail themselves of its offerings.

The Tufts Experimental College, governed by a student-faculty board, started in 1964 by offering two seminars, but by 1970-71 they were turning down fifteen to twenty proposals per term to stick to a manageable, self-imposed limit. The following table shows the number of seminars with their enrollments for the first seven years of college:

	Taught by Undergraduates		Taught by Others		Total Seminars	
	Number	Enrollment	Number	Enrollment	Number	Enrollment
1964-65			2	26	2	26
1965-66			8	196	8	196
1966-67	6	69	10	176	16	245
1967-68	27	384	10	159	37	543
1968-69	39	556	13	246	52	802
1969-70	61	918	28	526	89	1444
1970-71	45	741	60	825	105	1566
TOTAL	178	2668	133	2154	309	4822

In terms of both number of courses and enrollments, the College is now the fourth largest department on campus.

The distribution of instructors for the seminars for 1969-1971 was as follows:

Tufts Faculty	30%
Undergraduate Students	30%
Visitors	30%
Graduate Students	10%

Each of these groups will be discussed in turn.

Faculty led seminars: Faculty are recruited to teach at the Experimental College through a letter sent to all faculty and a notice in the University newspaper. All faculty who teach in the College do so in addition to their regular load, despite faculty legislation encouraging the contrary. The College is neither allowed to pay Tufts faculty nor financially able to reimburse their departments. Each course instructor is only allowed limited funds for course expenses.

Student led seminars: Undergraduates who teach in the Experimental College for the first time receive credit for two courses since, in addition to leading a course, they take a seminar concerned with teaching. The purpose of this seminar is to discuss problems which arise while teaching, and hopefully to improve the student's first teaching effort.

All student-led seminars must have a faculty sponsor. The seriousness with which this is taken is indicated by the fact that at the end of a term when all faculty are asked for written comment about the course they "sponsored", only 20% have been able to reply, although efforts are now being made to get sponsors more actively involved in courses by working with the instructors in "Leading a Seminar" and attending classes.

Class size limits of 12 freshmen and 20 for upperclassmen were imposed to avoid the lack of student-teacher interaction characterizing other Tufts courses, particularly freshman courses. Because of the limitations, students are excluded from many seminars and the coordinator estimated that potential student interest in seminars is twice as large as that currently enrolled.

Although freshman seminars were the first Tufts program to permit student-teachers, only ten were offered for 1970-71. The program appears to be dying, largely as a result of recently initiated English department freshman seminars. (see General Education)

The student-teachers almost universally find their experiences to be rewarding. One of the most common responses according to a College-administered questionnaire for all former instructors is that the instructor started with a concrete idea of what he wanted to accomplish, and concluded that their class was too diversified for complete success. Student-teachers felt that because courses are pass/fail, students don't put as much effort into them and most also said they would have organized the material differently.

The students taking courses taught by their peers rated them very slightly below faculty-led courses. Their objections usually had to do with the coherence and structure of their seminar. Students indicate that they do less work for a student-led course, and the observations of the coordinator are that the students do less "formal" reading, but generally produce good papers. Nevertheless, the 1968 faculty evaluation of the College indicates that student-led courses are a source of concern for many faculty members.

Visitor-led seminars: Although visitors are not recruited for the Experimental College, a diversified group have offered themselves each year. These include staff from the University, retired people from the surrounding area, and people active in various endeavors in the Boston area. At least one of these people has moved onto the regular University faculty after spending a year at the College. Visitors are the only teachers the College is authorized to pay, although efforts are being made to pay graduate students who teach at the College. The amount of payment is at the discretion of the Board, and no visiting lecturer may be paid for more than two terms. The College has shared the cost of a visitor with a department at least a half dozen times. For example, the cost of a visitor offering a welfare rights seminar was shared by the Political Science department, and the cost of a seminar on "Biology and Education" was split four ways.

Again, according to the tabulations of the College, the reactions of students in seminars taught by outsiders has been similar to that of those in student-led courses. This suggests that the problems in the courses could be accounted for by the lack of experience of the teacher rather than any factors which might be expected to arise from students being taught by their peers.

Graduate student-led seminars: Although graduate students can teach in the College, few have done so. This is due, no doubt, in part to the fact that they receive neither credit nor money for participation. Nevertheless, the Board of the College hopes to be able to attract more graduate students to the College as some graduate departments give credit for teaching in the College and some money is made available for such service.

When the Seminar Program was started, the faculty greeted it with great enthusiasm. As the number of courses mushroomed several years ago, the coordinator felt a bit of skepticism developed. By 1971, however, much of this skepticism had disappeared and more of the College's offerings had been accepted for major and distribution requirements. This has usually occurred only through individual petition, however.

One idea of the Experimental College and the Seminar Program specifically is to move "innovations" into the University curriculum. It is for that reason that no teacher of a seminar can be paid more than twice, and few of the seminars have been offered more than twice. In recent years, departments have been picking up about two or three courses a year, although the staff of the College feel they haven't had sufficient time to push all the departments which should be adopting their courses.

Statistics compiled by the Board of the College show that students compared their seminars very favorably with their other courses at Tufts. The only factor in which the seminars rated below other University courses was the amount of work put into each class.

Auditing for Breadth: This program, administered by the Experimental College, allows a student to receive course credit for one course by auditing three. (This can be divided between two semesters.) The program, started in 1965, had attracted about 200 students by the end of 1970-71. Over 50 students had started and withdrawn. A study compiled by the program's designer in the Spring of 1970 reported that the then 151 students who had passed through the program had audited over 130 courses in 25 departments. When the students were asked to rate their enthusiasm for the program as "high", "moderate", or "low", 85% chose "high". The most frequently cited strengths were the "broad exposure and removal of pressure" while the weakness mentioned most often was the difficulty of deciding which courses would be most beneficial to audit.

Participant in Discovery: This program was started in 1969 to give students an opportunity to work with senior investigators on research projects. The College sends an inquiry letter to all faculty members, including those in Tufts Medical and Dental Schools, asking if they are doing research in which a student could participate. If a student responds to the list of opportunities accumulated, an apprentice-like relationship is arranged for one semester. This replaces one course in the student's program. The Participant in Discovery option has attracted forty to fifty students in each of its two years, and currently is able to offer a greater number of research opportunities than are demanded. This, of course, is partly attributable to some options having less appeal to students. To date, almost all of the offerings have been in the natural sciences.

Others: The final programs of the Experimental College to be discussed are the three structures which have already found a home elsewhere in the University. One is the Applied Physics Program which was prevented entrance into the regular curriculum through a lack of agreement between the Engineering and Physics Departments. By 1971, the program was being run by the Physics Department.

A coordinated program which offered a student both a Bachelor's and Master's degree was originally placed in the College and is now moving completely into the Graduate School.

Lastly, Introduction to Research and Scholarship is a program started by the Experimental College to help improve the writing of freshmen by matching each student with an upperclassman and faculty advisor. The freshman and upperclassman meet together for three hours a week, and with the advisor for a fourth. Although the program is open to all freshmen, those with low verbal SAT scores are specifically invited into the program.

An evaluation of this program conducted after its first semester of operation indicated that those who had accepted invitation into the program had achieved grades at the same level as the rest of the class, while those who had declined had received lower grades. The program attracted 137 freshmen in its first two years of operation out of a possible 600, before it was adopted as a regular University program.

Experimental College Enrollments

	Number of Enrollments	Autumn 1964-Spring 1970 Total Undergraduate Students at Tufts Over Two Semesters	Experimental College Enrollments as Percentage of Undergraduates
1964-65	27	6344	.9
1965-66	226	6577	6.7
1966-67	233	6285	10.3
1967-68	599	6441	18.5
1968-69	939	6230	29.4
1969-70	1714	6583	51.9

Some of the programs, such as Introduction to Research and Scholarship, which have found a temporary home at the Experimental College also owe their existence to the College. Within the weighty bureaucracy of a University it undoubtedly helps the introduction of new programs if they can be begun in a way that does not automatically institutionalize their existence. Initiation of a program under other circumstances tends to imply a more permanent commitment owing to faculty appointments, interest groups, and funding. New programs offered through already existing administrative structures can be more easily abandoned should they prove unsuccessful. The Experimental College is particularly well suited to sponsor such programs since it is a structure established explicitly for experimentation.

Other benefits from the Experimental College have accrued to the University without actually being incorporated. This concept can be expanded by the inclusion of programs merely needing a place to be coordinated such as Participant in Discovery which benefits students and researchers and costs no money.

Two other benefits should be noted. First, it is reasonable to suppose that the College, through its involvement in the surrounding community, has positively affected the University's public relations. Secondly, the minor use of the College as a laboratory for experimentation with subject matter and teaching format necessarily has some impact upon the faculty members when they return to their departmental classrooms. Also, although such things are impossible to measure, it is probably true as the 1970 evaluation concludes that "The College, by providing an example of innovation, has improved the climate for change in the whole University."

On the other hand, there is a problem inherent in having a "center for change." That problem, which was also felt at Yale and Stanford, is that those departments and individuals outside that center will abrogate all innovation to it and assume a position of greater stability and/or intransigence than they would have otherwise. This for example, happened until recently with independent study in some departments, which routinely sent most applications to the Experimental College.

The College also suffered from problems, which, hopefully, are not inevitable. The two biggest seem to be the small degree of faculty participation and the difficulty of managing the College. Although these are both significant, the first is felt to have improved in the last two years and the College is far from immobilized or even threatened by either.

The 1970 evaluation of the College describes the faculty mood at the time the legislation was passed as "cautiously willing to try a new idea rather than thoroughly enthusiastic." What this has apparently meant to most faculty members is that passage of the proposal for the College entailed a responsibility only to watch the College develop, rather than to participate. Although the enabling legislation for the College suggested that faculty receive reduced teaching loads when participating in the College, as noted earlier, this has rarely occurred.

While the faculty who remain uninvolved do not seem to make any effort to subvert the College, the words of the 1969-70 Chairman of the College Board seem apt:

> "For several professors, the Experimental College is one of the most exciting activities on the campus, where ideas and practice come together for once. Yet for most professors, it is a waste of professional energies, since it is not a 'route to university or professional advancement'."

For example, the speaker himself, was denied tenure and forced to leave Tufts. His successor, said that no one has time to be both a full-time faculty member, and the Chairman of the Board. She, in fact, was the Board's secretary the previous year, and was promoted at least in part because she did not have other university commitments.

The 1970 evaluation said the problem of time affected the whole Board. "It seems unlikely that nine people, busy with their other activities as students and teachers, can simultaneously function both as stimulators of innovation and as monitors of the College's operations."

The budget for the College's seventh year was approximately $28,000. The largest expense was salaries for visitors, which range up to $1000 each. The other costs, in descending order of magnitude, were office supplies including films, administrative salaries, and equipment. Although this budget, by many standards, is small, its growth since the inception of the College may reflect the administration's enthusiasm:

Experimental College Budget, 1964-71

1964-65	$2,000
1965-66	$3,630
1966-67	$5,510
1967-68	$5,000
1968-69	$5,000
1969-70	$18,000
1970-71	$28,200

The following exerpt discussing the budget for 1969, taken from the 1970 evaluation helps indicate the relative cost of the College:

> "In terms of the cost of instruction, the Experimental College is a uniquely economical portion of the University. If a rough figure of 1600 enrollments in the College for 1969-70 is divided into the budgeted $18000, the cost per course enrollment comes to $11.25 . . . If students regard their tuition

> the purchase of credits toward degrees . . . then each may be said now to spend roughly $2400 per year for 30 credits, or $80 a credit. Some 1600 student enrollments, typically at three credits a course or program, plus three additional credits for some 70 peer teachers this year, yields a total of over 5000 credits, representing the expenditure of some $400,000 in tuition."

The evaluation concludes, ". . . it seems clear that, if there were no Experimental College at Tufts, the regular curriculum would be absorbing 1600 more course enrollments this year, in larger classes or in extra classes."

STUDENT TEACHING

Arrangements for student-taught courses were studied at four colleges in addition to Tufts and Stanford (where they were discussed as part of larger undertakings): Antioch, Santa Cruz, Sarah Lawrence, and Trinity. The procedure of the programs, which was almost identical at the six schools is started by an interested student writing a detailed course description, usually including a reading list and means of student and course evaluation. The student then selects a faculty advisor and submits the proposal to an appropriate committee for approval. Most of the courses are offered pass/fail either through requirement or student option.

The University of California, Santa Cruz, alone states explicitly that only juniors and seniors can propose courses, yet this corresponds with the practice at the other schools. The courses usually have an upper limit for enrollment of between ten and twenty, but only Antioch College supplied a lower limit of five. At all schools, the student-teacher as well as the other students received credit for one course. Only at Tufts University, as noted previously, was a seminar in teaching offered to the course initiators.

Few student-taught courses have been mounted at any of the schools. At Antioch, between five and ten such courses have been offered each year while Sarah Lawrence College, which prominently displays the offering in its catalogue, has had only one or two student taught courses annually. Similarly, seven students were teaching other undergraduates at Trinity College, although between fifteen and twenty students were involved in teaching high school students in a program to be discussed further on. Finally, Santa Cruz offered eighteen student taught courses in 1970-71. While one or two student proposals at each college have been turned down and the sizes of the schools differ, it is fair to conclude that at each one a very small percentage of the student body has been attracted by the opportunity to teach a course.

Nevertheless, a much larger segment of the students are involved with student taught courses as participants. At Antioch, for example, which imposes no upper limit on the classes, an average of 254 students enrolled in student taught courses each term for the five terms from Winter '70 through Winter '71. It is interesting to note that of this group 990 students took one course, 120 took two courses, 10 took three courses, and 2 students took four.

While the number of sample participants in student-taught courses was necessarily small, certain factors are apparent. The reaction of student participants must be divided between those who taught and those who enrolled. Those in the first category universally found the experience to be difficult but worthwhile. While there was some disappointment expressed because of unanticipated problems and an inability to achieve all course goals, on balance every instructor interviewed was glad to have taught a course.

Appraisals by other students and faculty sponsors were less positive. Students indicated, as expected, that the quality of the offerings varied from course to course, but a majority in each school either felt the course was disappointing or worse than a faculty-led course. While the quality of the material, the flexibility and informality of the class, and the teacher's obvious enthusiasm were all frequently noted, poor structure, a lack of classroom leadership, and a lack of knowledge on the part of the teacher were more prevalent comments. Several students who had not participated found the idea inconceivable. A student as Sarah Lawrence said, "I can't understand why anyone would want to take one (student taught course) when they could take a real course instead."

Nevertheless, enthusiasm did exist both for the concept and for specific courses. Faculty sponsors were surprisingly more favorably impressed than the non-teaching student participants. While poor structure was again cited, faculty comments were more charitable, often saying the courses were "more exploratory than a professor's" or "a joint effort of all in the room".

Since student-taught courses were most beneficial to student teachers, additional programs offered by Tufts and Trinity are of great interest since they permit undergraduates to design and teach a course to other than undergraduates. These programs must be distinguished from the teacher training progams many colleges sponsor to give a student sufficient credits and experience to be certified as a public school teacher. Such programs assign a student to an elementary or secondary school teacher and usually require full-time participation for one or two terms.

Tufts, through its Experimental College, sponsors two programs which not only offer undergraduates a chance to teach, but also are of assistance to the neighboring community. Tufts has arranged with the nearby city of Somerville to supply teachers-students, faculty, or others--and the municipal government provides students, a building and advertising. While the number of courses offered has been low, they have been attended by a mixture of high school students and working men and women.

Another offering at Tufts, which has provided teaching opportunities for six undergraduates and one administrator is a course in English offered to the University's 21 Portuguese-speaking employees. The undergraduates receive credit for one course and their "students" receive time off from work.

The courses offered in these programs provide the same experience as teaching other undergraduates for the undergraduate-teacher. A more valuable encounter is offered the students, however, since they are taking a course which again is something they could not have otherwise. The undergraduates in student-taught courses, on the other hand, are taking the course in lieu of a faculty-led course which, according to the members of the student sample, they would probably have considered more valuable.

Trinity's High School Seminar Program embodies these benefits in a larger program which offers undergraduates credit for teaching one course offered to high school students. The students pay two dollars to enroll and do not receive any credit, although the program has the approval of the local Secondary Schools Principles' Association. Each Trinity student must have his course approved by a committee and supervised by a professor. At the end of the course, he is given a pass/fail evaluation by the advisor.

The program has been wonderful for those students who have participated. The seminar entailed more work than anticipated, but yielded very positive results to the instructor regardless of whether or not the course succeeded. It was indicated that a student-teacher had to be good in order to maintain attendance, and the reading list had to be short for the students to keep up because the seminars were taken in addition to their regular high school program. Several of the courses were criticized by their faculty sponsors for lacking academic quality and having bored the instructor and students. Other courses were praised as enjoyable and worthwhile.

Nineteen High School Seminars were given in 1969-70 and a greater number the following year. Between 15%-20% of the course proposals have been rejected.

INDEPENDENT STUDY

This section could be headed "self-directed study" in that the programs to be described are those which offer students a chance to work with no formal classroom meetings and, generally, little faculty contact. They will be referred to as "independent study," however, only because that has been the term used by most of the sponsoring schools.

This section discusses programs which have used defined mechanisms or official emphasis to encourage and expand the use of independent study. Such programs were examined at Santa Cruz, Brown, Tufts, Justin Morrill, Florida Presbyterian, Yale, Trinity, and New College.

Santa Cruz often encourages students to substitute independent study for course work. In this case, the encouragement comes more from a faculty and administration who believe such work is important than from any unique structure. The catalogue states that "Independent Study is regarded no less seriously than the regular offerings of the faculty."

There is no limit to the number of independent studies a student can take and, upon permission, they can be counted toward major fulfillment. Each is taken with the sponsorship of a professor. While all students are eligible to participate, it is intended for, and used primarily by upperclassmen. Of the 3700 students enrolled, approximately 800 independent studies are taken each quarter.

Santa Cruz, like other schools, often has more than one student investigating the same topic. While this is to be expected, it is often a logistical problem since professors in an area have difficulty finding the time to sponsor too many studies. Brown has attempted to take advantage of this by instituting Group Independent Study Projects (GISP)

GISPs are cooperative inquiries, in which students have the major responsibility for planning and conducting the course work. These credited courses are each sponsored by an instructor whose function is to approve the area and plan of the study, serve as course advisor, and evaluate the work of the course members. Graduate assistants, with departmental permission, can also sponsor GISPs.

The proposals are reviewed by two committees to assure academic quality and avoid undue duplication. They are generally initiated by one or two students, and others are invited to sign up and organizational meetings are then held to begin the work.

While this program is new, it has been very popular, particularly in social sciences and humanities. In 1968-69, its first year, 19 GISPs were presented with enrollments of 200. The following year, 75 projects attracted 685 students.

Departments at Tufts allow students to undertake an independent study, but the Experimental College has attempted to enlarge this offering. While it will not sponsor any study which can fit into a department, it does permit both individual and group study. All independent study proposals have a faculty sponsor and are reviewed by a student-faculty committee. The Experimental College has sponsored over 200 independent studies. These were projects which would not fit in a department because they sought credit for more than one course or they were of subject matter not representative of a department.

Tufts, like Brown and Santa Cruz, has been able to satisfactorily involve many students in independent study by expanding upon the notion that such study is not harmful, to say that it is beneficial and should be readily available to all. Several other schools have carried this further by requiring all students to pursue some independent study. Two colleges in the study--Justin Morrill and New College--operate in this manner.

New College requires students to complete four independent study projects (ISPs) before beginning their final year. Such projects normally require prior approval of the student's advisor and one month of intensive work. Until formal concentration requirements were abandoned, at least one ISP had to concern a topic outside the division of the student's major.

The Independent Studies Coordinator reported that students were generally satisfied with their ISPs, but that faculty thought too little work was being performed in some cases. 23% of the faculty sponsoring off-campus ISPs rated them only "fair-unsatisfactory." This figure was much lower for on-campus projects, which indicates that professors were least pleased with the projects they had been unable to regulate while in progress.

Faculty at New College were considerably less pleased with the quality of independent work than were professors at schools where student participation in such programs was voluntary, and therefore less frequent. Similar problems were found in almost all required undergraduate curriculum structures studied.

As noted, Justin Morrill College also requires some independent study, but in a form different from that at New College. Although twelve credits (three courses) of self-directed work is asked for, students are currently expected to meet this requirement through one project which consumes an entire quarter. It is preferred that such projects be undertaken off-campus, but on-campus projects are permissible.

Because independent study at Justin-Morrill is designed to be a full quarter's activity, rather than occasional substitutes for courses, it can be planned more coherently than at New College. Each student takes a preparation seminar the term preceeding his independent study, which includes journal maintenance and field study experience.

When the full-term field study is undertaken, little counseling is available to the student. He is made aware of projects undertaken by others and of cooperating agencies and organizations known to the University, but he must make his own arrangements. Projects initiated by students have varied from sailing in the Mediterranean to learning a language at Putney or living with a foreign family. The College contributes two-thirds of the tuition for certain programs and students are not permitted to earn money while on field study, in order to discourage the experiences found in some work-study programs of students simply working as waiters and meeting only American tourists.

The quarter after the student's return from the independent study a follow-up seminar is given to assimilate and share what he has learned. The entire independent study experience, including both seminars, is graded pass/fail.

Although occasional bad placement seemed to be the most serious problem, it is disappointing that a whole program which sounds so exciting has failed to elicit great enthusiasm from the students. Most students were putting the program off as long as possible because no project or subject had captured their interest. Nevertheless, the program's Director felt it provided a more valuable experience than the courses which might be taken in its place, and this observation appeared to be valid. Students returning from field study were often very enthusiastic about their experience, although it rarely seemed to lead to further study in an area.

Four programs were studied which accept a number of applicants to study independently for at least a full semester's credit.

The oldest of the four, the Scholars of the House program at Yale University, was created twenty years ago to allow a small number of students to design and pursue two full terms of independent work in the senior year. Students interested in this program meet with the appropriate committee chairman and then submit a letter of application containing a detailed description of the plan of work they propose to pursue. A faculty committee then interviews and selects the program's participants.

The accepted students work with a faculty advisor, usually of their own choice, and are freed from formal course requirements. An interview is scheduled in December for a progress report and, by May of the senior year, a finished essay or project must be presented "which must justify by its scope and quality the freedom which has been granted," and an oral examination designed specifically for each student must be passed. In addition, the Scholars of the House meet with the supervising committee every three weeks for dinner and a discussion of progress made by each student.

To be eligible for the program, a student must have completed all distribution requirements by the end of the junior year. Students are not required to finish their department's concentration requirements, though prospective students for the program are urged to work intensively in their major during the junior year.

Each year about 10% of the senior class applies for the program (100 students) and ten to fifteen are selected. In 1970-71, twelve students were chosen, and their topics were the following:

Field Ion Microscopy
The Theme of Ambiton
Double Poles in the S. Matrix
Psych-History of the Chinese in America
Life and Works of George Farquhar
Writing a Novel
Painting: Balancing Visual Process with Subject Matter
The Italian Renaissance Epic
Membrane and Relate Phase Transitions
Biography of Sarah Gertrude Millin
Sixteenth Century Architecture in Peru
Representative Realism-Art Portfolio

The student course critique makes several points regarding the Scholars of the House program. First, it is definitely not a "gut"and is recommended only "for those seriously involving themselves in an area which interests them and which cannot be pursued through any more formal course of study at Yale College." It is also suggested that "freedom and loneliness" have been the most significant factors to past Scholars of the House. The loneliness is partly alleviated by the recently added tri-weekly meetings. Finally, projects "never quite turn out the way the prospectus written in April before senior year outlines it."

A much newer program at Trinity College, called the Open Semester Program, provides a similar opportunity to pursue an uninterrupted independent study for one semester. This however, can be undertaken in any year, though it is recommended for one of the last two. It accounts for a full semester course load only if desired by the student. The semester may be used to fill concentration requirements at the discretion of the appropriate department, but no provision is made to exempt students from any requirements. A professor serves as the semester advisor with the responsibility for evaluating the Open Semster upon criteria established with the student. The semester is graded pass/fail and, as at Yale, students are required to pay the regular tuition fee for the semester in which they participate.

Unlike Yale's program, however, the Open Semester Program is not limited in size. Nevertheless, only 37 students enrolled the first year and 70 the second. Considering the program was available to approximately 1000 students in those two years, the extent of interest shown was similar to that at Yale, although participation has been higher.

The program works with the Office of Educational Services in attempting to find appropriate Open Semster

Opportunities to match student interest.

The Open Semster Program was considered a success for its participants. The Program Director rated the experiences of the first year students at 38% "good-to-excellent," 46% "passable-to-good," and 16% "below par," and the faculty advisors felt students accomplished a great deal. The most prominent problems noted were a lack of student-advisor consultation, a lack of commitment on the part of some sponsoring agencies, and the substitution by some students of a whirlwind of activity for purposeful involvement.

Tufts University's Experimental College sponsors independent study projects of one or two semesters, called Student Sabbaticals. The first one, sponsored in 1967, permitted a student to spend a semester in Spain combining a study of Spanish history and culture, an analysis of student political attitudes in Spain, and a photography project. In the first three years of the offering, there have been six Student Sabbaticals.

The last semester long independent study program to be discussed is also probably the most ambitions; the Jefferson House Program at Florida Presbyterian College (FPC).

Jefferson House is a program which exempts participants from formal graduation requirements and allows them to design up to four years of study, in cooperation with one or more of the FPC professors associated with the program.

Jefferson House is not a physical setting and there is no commonality of living within the program. The lack of commonality was built into the program to avoid a situation smacking of elitism.

The program currently consists of 90 students (8% of the student body) and nine faculty advisors. To be admitted, a student must explain to a faculty board what use he plans to make of the program.

The programs chosen by students in Jefferson House have been surprisingly traditional. According to several participating faculty, and confirmed by the student sample, over 80% of the students chose standard departmental majors, and tended to specialize more intensely than students in the regular program. This was particularly disappointing since FPC has had few interdisciplinary majors from outside Jefferson House.

The Massachusetts Institute of Technology (MIT) extended the basic tenets of Florida Presbyterian's Jefferson House to the freshman and sophomore years for a self-selected group of students in the Unified Science Study Program (USSP). During the summer, 1969, all Fall MIT freshmen were sent a description of USSP as envisioned by the staff, with an invitation to probe further. 28 MIT students and several area community college students enrolled. Students were required to write a proposal describing the program intended and to pursue this program on their own initiative with the aid of the faculty core available. Students participated in study of traditional subjects and regular University courses, including USSP seminars, individual USSP projects, regular MIT courses, film series, and educational colloquia. However, students in the program were required to complete general MIT requirements.

Program faculty consisted of a dozen full-time equivalent staff members, about a half dozen teaching assistants, and approximately ten additional staff members available on an occasional basis. It was felt by the Program Director Judah Schwartz, that the existing staff could "quite comfortably serve a larger number of students and indeed were quite willing to do so." As a result of the large staff and small student enrollment the program exceeded the regular cost per freshman at MIT. The first year of the program cost approximately $3000 per student. This cost is exceptionally high since it includes only costs related specifically to USSP. As the program grew out of the Education Research Center, few of the faculty involved came from MIT departments.

Of the 49 students who enrolled in the program during their freshman and sophomore yers, only 15 remained in Spring, 1971, at the termination of the first cycle. An equal number of program participants had left MIT entirely.

A detailed appraisal of USSP is not possible since the program was little more than a year old at the time of the UCE interviews. In addition, USSP students were difficult to locate because they were all over MIT and the country at the time of the interviewing. However, many of the problems, strengths, and weaknesses in the program are discussed in "Back to the Classroom" by Sandra Morgan and the 1969-70 USSP Evaluation by Judah Schwartz.

Lack of definition was by far the worst problem noted by faculty. Much of this difficulty arose solely because USSP was in its first year, so that no experience or precedents were available. Students felt the lack of definition specifically weakened the advising relationship and obscured the role of the program within the University. Students felt advising should always have been connected with their academic work and have been responsible for providing them with feedback. Faculty too felt advising weak.

Similarly, students were unaware that their USSP work did not meet any of the general Institute requirements.

As a result, students were made to compensate for their USSP freedom with a burden of heavy requirements, few electives, and the need to choose a major immediately after leaving the program.

After leaving the USSP students felt the regular program differed in providing "expert guidance in selection and condensation of materials; others praised the availability of faculty and resources. Some also liked the aspect of not having to cope with self-evaluation." ("Back to the Classroom," p. 18) Students complained, however, that the regular MIT program applied constant pressure while failing to give them time to think. Similarly, "Some complained that there was lack of both theory and application in material covered by subjects."

New College expanded the MIT USSP by offering a contract system for all students for up to four years.

Contractual Program--"The central idea of the contractual program is that a student will develop, in term-by-term consultation with two faculty sponsors of his choosing, a program of courses, tutorials, etc. which meets with his particular needs. The two sponsors must be from different disciplines."

Noncontractual Program--"A noncontractual student is obliged to complete three undertakings--seminars, lecture courses, tutorials, special projects, etc.--each term in order to be satisfactorily engaged."

A noncontractual student must have one faculty advisor who will assist him in developing an intelligent course of study and who will approve and sign his registration for each term." (from New College Handbook)

The chart below shows the number of people who opted for a contractual program in the first four terms such activity was possible. Freshmen are encouraged to take a noncontractual program.

NUMBER AND PERCENT OF NEW COLLEGE STUDENTS SELECTING CONTRACTUAL PROGRAMS

	Freshmen	Upper Class	Total	Percent Without Freshmen
Terms				
Fall, 1969				
Contract	4	45	49	25%
Non-Contract	198	141	339	75%
Spring, 1970				
Contract	1	41	42	17%
Non-Contract	253	197	450	83%
Fall, 1970				
Contract				13%
Non-Contract				87%
Spring, 1971				
Contract .				28%
Non-Contract				72%

In 1971-72, the New College system was changed to require all students to work under contract.

New College's Institutional Self-Study (1970) divided the contractual programs into three types:

> "mostly individual projects and research
> mostly regularly scheduled seminars
> combination of seminars and individual work."

Their analysis of contractual programs formed during 1969-70 showed the following breakdown:

TYPE OF WORK INCLUDED IN NEW COLLEGE CONTRACTUAL PROGRAMS

	Mostly Individual	Mostly Traditional College Program	Combination
First Year	38%	29%	33%
Second Year	18%	51%	31%
Third and Fourth Year	20%	44%	35%
TOTAL	23%	44%	33%

Most students and faculty agreed with the idea of offering contracts but some faculty were disappointed with the quality of work they had witnessed. Professors who had sponsored contracts noted that the students involved were exciting and that advising them on their contracts had given them a welcome opportunity to get close to students.

Weaknesses noted had to do with advising and specialization. Some faculty said a contract could be executed with virtually no faculty supervision, and that sloppy work often resulted. It was also said by a few that New College needed greater specialization than the contract system allowed. A biologist, for example, turns down offers to sponsor contracts because he feels it is more important to make biologists.

Faculty were asked the extent of their involvement with contracts and indicated a range from four or five sponsorships a year to none. All seemed to feel a desire to be an active advisor to the concentrators, but some acknowledged that this had been impossible because much of the work students had done was off-campus. Others nevertheless demanded a weekly meeting or some form of written communication. Several seemed eager to say that in considering a contract they are not simply a rubber stamp. They ask some students to revise their proposals and some they even reject.

Examples of contracts from the students interviewed included work on a campaign in New York, a study of draft evaders in Canada, and a paper written in New York on fantasy literature. On-campus contracts relating to history, chemistry, and literature were described. In 1970-71, contracts were undertaken by a group of students who, as part of their contracts, agreed to live in Kingsley Hall and interact with each other. Several faculty criticized the use of contracts by numerous Kingsley Hall students which amounted to no more than enrollment in a given number of courses.

One of the advantages of the contract system is that it allows a student to make use of facilities not present at New College. Thus one student interviewed was an anthropology major, although New College possessed no anthropologists. For her Baccalaureate it was planned that outside faculty would be brought in. Another advantage cited was that students under contract get much individual faculty attention.

4-1-4 CALENDAR

An alternative to mandatory independent study is the establishment of a period of time in which normal college functioning is suspended and several options, including independent study, are made readily available. In this time period, students have to confront the issue of engaging in independent work more directly since their regular routine of taking courses is disrupted.

The 4-1-4 calendar arrangement is a method for providing this mandatory one-month independent study period for all students. With this calendar, first semester classes begin in late August or early September and end before Christmas while second semester classes begin in late January or early February and end in late May or early June. The one-month interim period is used for independent study. In November, 1969, according to a study conducted by Laura B. Lenoir, Rhyne College, Hickory, North Carolina, (ED 034 496) entitled "A Survey of 95 Colleges Concerning Academic Calendar and the 4-1-4 System, Summer Employment, and Sabbatical Leave," 137 colleges were using 4-1-4, 48 institutions were actively considering it, and 3 colleges had initiated the program, and later discarded it. A February, 1968 study by Pittinger of T. L. Culver-Stockton College, Canton, Mo. entitled "Research Project Investigating the 4-1-4 Month Calendar Plan" examined 35 colleges, 10 in depth. The surveyed colleges indicated that the advantages of the interim session included "reduced course load during the regular semester, opportunities for independent study and off-campus study programs, the interdisciplinary emphasis of course work, and the change of pace." Disadvantages cited included "loss of continuity in year long courses, faculty load arrangement problems, poor student attendance, lack of student initiative, and the additional work required in planning." Several schools cited no disadvantages. Smith College, however, adopted the 4-1-4 but dropped it because of compressed and rapid courses, weak projects, and lack of student initiative." The 10 sample schools studied in depth felt the interim session courses did not cost more than semester courses (9-1). Similarly, the colleges indicated that the January term did not raise the course costs (4-2-rest unsure).

Florida Presbyterian, one of the first colleges to introduce 4-1-4, provides corroboration of the Pittenger study and offers a good context for an in-depth study of the 4-1-4. The idea of the one-month period at Florida Presbyterian, called Winter Term, is to provide a period of intensive study, and students may enroll in courses designed by a professor or they may create their own projects. The courses generally include more student participation and/or research than those offered throughout the year. Each professor directs the activities of 15 to 20 students and is available for consultation throughout the four weeks. Students working independently must have the sponsorship of a professor.

A representative list of the activities in a recent Winter Term include the following:

COURSES ON:

Paper Mache Projects
Cartooning
German Theatre
Trip to Munich
Philosophy of Africa
Witchcraft
Trip to England
Alice in Wonderland
Black Community
Trip to Jamaica
Myth
Civil Disorders
Trip to German
Homer and Joyce
Devise a Language
Regional Integration
U.S. and Underdeveloped Countries
Pornography
Literature and Change
Development of Psychological Intelligence
Behavior Control
Trip to Mexico
Ecology Lab on Population Distribution
Chinese Drama
Russian Revolution
Art-trip to Switzerland
Ionesco

INDIVIDUAL PROJECTS ON:

Tutoring in Black Ghetto
Readings
Commune in Georgia
Parts of an Encounter Group
Governor's Campaign Intern
Lived in New Hampshire Wilderness
Black Studies
Psychology Experiment
Biology Experiment
Studied Unitarianism
Worked with Retarded Children
Studied London Middle School

Learned the Recorder
Built a Harpsichord
Wrote Poetry
Lived in New York
Meaning of Death
Studied Small Loan Assoc.
Studied Nordic Religion
Went to a New England College
Studied Montessori Education
Quaker Studies
Murder in Multi-Racial Backgrounds
Aztecs
Ocean Lanes and Crossings
Dead Sea Scrolls

Although students have great freedom in selecting activities, the courses have registration limits and sometimes have to exclude students. This, and the fact that the junior year Winter Term must focus on a topic connected to the student's major, were the most notable student criticisms of the program. About half of the sample characterized the program as either "the best part of the college," "a good change of pace," or "a good way to learn." Faculty members were further delighted because this period permitted them to study with students an area of interest or an area in which they were doing research.

GRADING

Grading Systems were examined at 20 of the 26 sample colleges:

Antioch: Pass/No Credit, with written evaluations
Bard: Letter grades, with written evaluations (Pass/Fail in studio and instructor-initiated courses)
Berkeley-Experimental College Program: Pass/Fail
Bowdoin: Four Point Pass/Fail
Brandeis: Letter grades with partial Pass/Fail
Brown: Pass/No Credit with written evaluations, or Letter Grades/No Credit
Cal. Tech.: Pass/Fail Freshman year
Florida Presbyterian: Three point Pass/Fail and written evaluations
Harvard: Pass/Fail in freshman seminars; Partial Pass/Fail and letter grades
Haverford: Partial Pass/Fail for Freshman and Sophomore years; numerical grades and written evaluations in selected courses
Michigan-Residential College: Partial Pass/Fail and letter grades
New: Pass/No Credit with written evaluations
Prescott; Covert letter grades; three point Pass/Fail with written evaluations
Reed: Covert grades
St. John's: Covert letter grades and oral evaluations
Santa Cruz: Pass/Fail with written evaluations; grades in selected courses
Sarah Lawrence: Covert letter grades with written evaluations
Trinity: Letter grades; partial Pass/Fail
Wesleyan: Letter grades; partial Pass/Fail
Yale: Four point Pass/Fail

The twenty college evaluations form the basis for discussion of the different grading structures: written evaluations, oral evaluations, covert letter grades, three and four point pass/fail, partial pass/fail, pass/fail, pass/fail in special programs, pass/fail in the freshman and sophomore years, and numerical and letter grades.

WRITTEN EVALUATIONS

Written evaluations were examined at ten schools: Antioch, Bard, Brown, Florida Presbyterian, Haverford, Residential College-Michigan, New College, Santa Cruz, Sarah Lawrence, and Wesleyan.

The problem of an Antioch student who had contentless evaluations in the half of her courses which were evaluated is an excellent representation of the greatest weakness in written evaluation grading. Evaluations varying from a two-page single-spaced typewritten analysis of student performance to a single letter or sentence comment such as "A", "would give "B-" or 82," "a fine line separated the student and I and one day we crossed it" were observed. Far more frequent were the single sentence comments.

Evaluations are difficult and much more time consuming for faculty to write than grades. One faculty member, who felt evaluations were not demanding, said he spent at least one half hour writing each one, after having already considered the student's performance. The additional effort noted by the large percentages of faculty members underscores the gross differences in methodology involved in writing evaluations, and letter and numerical grading. The grader does not have to rationalize his feelings as clearly in letter grades as he does in evaluations. The "good" evaluation minimally requires the author to review the student's entire performance and to enumerate the student's strengths and weaknesses. The transition to an evaluation system involves more than merely writing the thought behind the previous letter grade in that, in most cases, faculty indicated the process required by the evaluation was not previously employed. Politeness is one of the shortcomings of written evaluations. Evaluators have said they were unable to tell the "C" student "You lack ability and are wasting time in area X." For this reason, several faculty preferred the detachment and impersonality of letter grades. Giving a"C" says nothing about the student as a person. An occasional student agreed, feeling his evaluations were too personal. A study at Haverford College, conducted by Associate Dean of the College David Potter, indicated that Haverford professors toned down evaluations regularly to the point of making them noninformational for fear of hurting students (or having to face the student again). In addition, some faculty indicated censoring evaluations because they are part of a public record. This was not always the case since at least University of California, Santa Cruz and Sarah Lawrence College employed censors to examine evaluations before public exposure. A small percentage of faculty at each college made one of two discoveries resulting in a mechanical evaluation not different from grades. Either the graders found the transition to written evaluations too difficult for a variety of reasons and sought to avoid it, or they were unable to deal with the paradigm of the "C" student.

The major pitfalls were best illustrated by the small percentage of faculty at each school who said, "I just don't know what to write."

It should be clear that a faculty member must know his students well if he is to write a meaningful evaluation of their performance. Graders and students alike frequently indicated that evaluation was poor in large classes with definitions of "large" ranging from ten to forty. The 1970 report "On Academic Standards and Procedures at Wesleyan" indicates that "On the whole, evaluations seem less complete and are more often not submitted in large classes." At Brown University a student in a lecture of several hundred may request a written evaluation and such instances were frequently cited. To digress momentarily, large classes are most common in general education courses and early major courses; thus, students are most likely to receive their poorest evaluations in their critical first two years. Some faculty were unable to provide evaluations for middle range inconspicuous students. As a result, they reserved evaluations for the best and worst performing students. When evaluations were required of these professors for their middle range students, they provided what were characterized as "general," "meaningless," and "mechanical" evaluations.

Evaluation forms themselves have created large problems. At two schools evaluation forms had check boxes and about four-by-one inch spaces for comments. Small numbers of faculty at each school indicated that they only checked the boxes. These evaluations were often criticized for saying little. At several other schools a blank piece of paper was provided for faculty comments. Lack of uniformity and absence of norms in preparation of these evaluations were cited by three institutional studies and by many administrators, faculty, and students. In each case, student self-evaluations were not uncommon with one-third of all evaluations at Antioch College being of this nature. As a result of this multi-method approach, administrators frequently complained that it was not possible to get an overall picture of many of the students. A similar problem occurs when faculty use evaluation neither as grades nor as supplements to grades, but rather to speak to an individual student. A poor student may get an evaluation indicating he worked hard and did the best he could, while an "A" student may receive an evaluation saying he lacked initiative. As such, evaluations lose any public value they might have served. In graded systems combined with written evaluations, students frequently viewed the effect as a lack of coordination between grades and evaluations when, in fact, the discrepancy represented a letter grade comparison with peers and an evaluation comparison with a student's potential. To prevent this misunderstanding and the associated problems of multi-method evaluations, objectification of purpose and format for evaluations must be specified to the understanding of students, faculty, and administrators.

The three institutional studies employed urged greater faculty commitment to evaluations. Student opinions as to faculty seriousness varied considerably, with students most negative at Brown and most positive at Antioch and Sarah Lawrence. Very common, and probably most accurate, was the view that faculty attitudes vary with all being neither completely caring nor uncaring. Yet there is a marked difference between the way evaluations are perceived at Sarah Lawrence, where all the faculty with one exception viewed the evaluations positively, and at Brown, where most of the faculty viewed the evaluations negatively. As a result of faculty attitudes and similar administrative views, evaluations are far more seriously regarded at Sarah Lawrence. At Brown, a few faculty said they personally had discouraged student evaluation requests.

School size is significant as a determinant of the success of an evaluation system. Evaluations were viewed far more positively at schools with smaller student-faculty ratios and greater student-faculty contact time, since these schools had greater student-faculty interaction. This explains why evaluations were regarded so poorly at Brown, a large school with less than average student-faculty contact time. At the smaller schools, however, evaluations were sometimes criticized for repeating what faculty had already told the students. At schools like Santa Cruz, where size increases are planned in the next few years, evaluations will probably become poorer in quality and less frequent in number. As one Santa Cruz professor said, "The written evaluation system is a good way to begin a school, but it cannot be sustained after the school becomes increasingly complex."

Evaluations made little difference in school environment or student performance. The only comments recorded consistently, though in small numbers, were that evaluat ions did result in a dimunition of pressure and provided a more personal touch. On the other hand, students indicated difficulty in obtaining evaluations from their instructors and complained that they were usually late. The lateness results, in part, from the additional time required to write the evaluations.

At Santa Cruz and Brown particularly, many students readily admitted little interest in their evaluations, saying they hadn't seen them in several semesters, if at all. Only part of this attitude was the result of poor evaluations; much of the attitude simply resulted from a lack of interest or, in several cases, more specifically in a lack of interest in what a particular faculty member had to say. At Brown, where students must request evaluations, faculty indicated abuses of the system in that students requested evaluations after the semester ended in only those courses in which they had performed well. Similarly, cases of "evaluation grubbing" were cited at two other schools.

Finally, evaluations cause added administrative expense and use additional faculty time. The exact differential has not been computed at any sample school, though institutional research at Antioch indicated the cost difference is great.

ORAL EVALUATIONS

Oral examinations were examined at St. John's College.

Oral examinations in the student's presence, as practiced at St. John's intensified many of the problems found with written evaluations. Most notably there was an enhanced level of politeness and lack of candor imposed in part by the fear of unnecessary cruelty to students, but also by the evaluation format of face to face confrontation. As stated by one instructor, faculty are more favorably inclined when the student is present. In addition, the time commitment involved in preparing and delivering evaluations is greater than that of written evaluations simply by virtue of the formal sessions required.

The St. John's don rag (evaluation session) was more often criticized for its discontinuity with grades than were written evaluations, since most instructors indicated they used the sessions to evaluate students only according to their own ability. It is common for a "C" student to be praised for giving his all, rather than being told he is only average, and for the "A" student to be criticized for "slacking off."

Many felt the evaluation session repetitive. St. John's is a small school with close contact between students and faculty, so there is an enhanced feedback and interest level as compared to other schools, causing the formal don rag to repeat much of the informal student-faculty sessions. As a result, the senior session was eliminated and serious discussion of elimination of the junior session was being entertained during the Spring, 1971.

The oral evaluation is especially helpful for the shy student since it forces him to meet with all of his instructors at regular intervals. Instructors indicated that these meetings frequently resulted in follow-up dialogue between such students and the instructor.

The public nature of the St. John's evaluation in the presence of students and colleagues caused the evaluating instructor to consider his job more seriously than the author of written evaluations. The one-sentence evaluation is no longer possible, nor is omission of evaluations for the average student.

COVERT GRADES

Covert grading was examined at four schools: Reed, Prescott, Sarah Lawrence, and St. John's.

Covert grading as examined in this report designates those letter graded systems employed only for external use and created with the purpose of denying or discouraging student knowledge of grades.

The rationale for covert grades is to deemphasize grades, in order to redirect student interest in learning. Elimination of overt grades was intended to minimize the anxiety and competition associated with traditional grading. Anxiety over the ignorance of grades was not expected since all of the systems notify students when doing poorly.

The most notable fact about covert grading systems is that they fail to be covert. At Reed College 83%, at Prescott 25%, at St. John's 36%, and at Sarah Lawrence 48% of the student samples had knowledge of their grades. The Reed findings were confirmed by a 1969 study indicating students at Reed knew their grades with great accuracy. The percentages presented might be significantly lower than the actual percentage of students who knew their grades, since at each school there was a stigma involved in asking for grades. It was not uncommon for students to blush when admitting they had asked for grades, or for peers in group interviews to react when one or more of their number admitted such knowledge.

The large divergence in the percentages is accounted for by several factors. Reed is the only one of the four schools not providing additional student feedback mechanisms. Each of the other schools has an oral or written evaluation and Prescott even supplements the evaluation with an Honors/Satisfactory/Fail designation. As a result, the Reed student receives the least evaluative information and the Prescott student receives the most. In addition, a larger percentage of Reed students attend graduate school than do the students from the other colleges, so the Reed students are under greater pressure to ascertain their grades. It should be noted that each of the schools maintain cumulative averages and class rank. Lastly, Reed has by far the most difficult entrance requirements, with Sarah Lawrence following second. It should therefore not be surprising that 49% of the Reed students felt a high degree of anxiety over grades; a level much higher than that expressed at the other schools. It is interesting to note that feeling anxiety was considered negative so that students consistently noted its occurrance in others rather than in themselves. The students who attended Sarah Lawrence and especially Reed have been high achievers in largely grade oriented systems. The habits and values derived from twelve years of such education are not easily dismissed upon entrance into a new system.

Student grades were provided by individual instructors, advisors, or the Dean's office. At Reed, all the faculty indicated giving anxious students their grades directly or with codes used to maintain the covert veneer, i.e., a student would be told he did "exceptionally" in an "A" course, "above average" in a "B" course, etc. Similarly, at the other schools the vast majority of faculty said they would tell students their grades, though not in general as covertly as at Reed. At Sarah Lawrence, one administrator said more students are coming to see their grades every year.

A high percentage of interviewees at each of the schools used the expression "hypocritical" (from one-eighth to one-half of the faculty samples and one-quarter to one-half of the student samples) though it was not suggested by interviewers. This represents a high level of dissatisfaction, though it is by no means clear that this dissatisfaction is based on other than ideology. As the covertness in grading exists mostly in theory, so may the criticism directed against it.

FOUR-POINT PASS/FAIL

Four point pass/fail systems were examined at Yale and Bowdoin: Honors, high pass, pass, fail.

Four point grading systems, H/HP/P/F, as examined at Yale and Bowdoin are the same in practice as A/B/C/F grading systems according to faculty and students. There has, as yet, been no detailed evaluation of the Bowdoin system, but at Yale the grades are very inflated. Faculty and students alike indicated that "P" had become a poor grade. "P" accounts for only one-quarter of Yale's grades with almost all the rest being High Pass and Honors. Only about 7% of the grades were Fail or incomplete (a little over 1% were Fail) indicating that "D"s were absorbed in "Pass" at Yale. Graduate school practices designating only "A" and "B" respectable grades were carried to the undergraduate college.

Students and faculty at Bowdoin greeted the system neutrally, feeling little, if any, difference from the twelve point system abandoned in 1967. At Yale, where the transition from a numerical system occurred in 1967, the faculty also were not enthusiastic with only 9% highly favoring the four point system, 54% feeling the four point system fair, and 37% labeling it poor.

THREE-POINT GRADING

Three point grading systems were examined at Prescott and Florida Presbyterian.

The Honors/Pass/Fail system was employed at two colleges, Prescott and Florida Presbyterian, though each use supplementary written evaluations. The largest plurality of faculty and student interviewees responded positively to the three point system, though the majority of each sample was negative and/or neutral. The most significant problem is that the definition of "honors" is not clear. At Prescott, which uses the system only for internal purposes, Honors is granted for "sustained and exceptional scholarship" and at Florida Presbyterian Honors is granted for "work distinctly above average." These are the clearest guidelines available. In the Prescott faculty sample, 12% never gave Honors, 18% gave it only for "A" work, and the remaining 70% gave Honors rarely depending entirely upon personal criteria. Individuals in the Florida Presbyterian faculty sample gave between 0% and 100% of their grades as Honors as compared to a school-wide average of 30%. An increase in the number of "H"s given at Florida Presbyterian has been noted over the past few years. It should not be surprising therefore that "arbitrary" was frequently used by both students and faculty to describe the three point grading system.

Students and faculty also complained that this system is too vague, especially with regard to the "P" designation. In a few cases getting a "P" was not felt sufficient reward for an almost "H" student. Similarly, several faculty said they were unable to distinguish between middle students adequately. One faculty member felt the grading system tended to enhance mediocrity. In addition, graduate schools, especially Medical Schools utilizing central admissions services, commonly translate the "P" as a "C" when evaluating the student transcript. This method severely handicaps the almost "H" student. On the positive side, however, this system was felt by several faculty to diminish pressure significantly.

Solutions to the problem posed are not easy. Three point grading systems are initiated to deemphasize grades; therefore providing fixed percentages of "H", "P", and "F" grades would work against this goal. Establishing additional work as the only criteria for "H" would still not distinguish the excellent "P" student in graduate admissions. These were the most commonly advanced alternatives, with the exception of eliminating the "H" which was suggested by one-third of the Florida Presbyterian faculty.

PARTIAL PASS/FAIL SYSTEMS

The method of providing students with a given number of courses which can be taken on a pass/fail basis was examined at Brandeis, Brown, Trinity, and the University of Michigan Residential College. Brown and the Residential College (RC) differ from this model in that the number of pass/fail courses is variable; for instance, a student at Brown may, in any term, elect any number of courses pass/fail.

Students utilized the pass/fail system primarily to avoid hurting their cumulative averages or to take courses they ordinarily would avoid. These facts were cited by as much as 44% of the student sample, though less frequently at Brown because pass/fail is the rule there rather than the exception. Less often students said they used pass/fail to obtain a specific desired knowledge--often focusing on only a portion of a non-major course--or to provide a "gut". A study of grading at Brandeis by Matthew Sgan (Journal of Higher Education; Nov., 1970; 638-645) indicates that most students use pass/fail to meet general education requirements. This finding is consistent with the reasons offered by students, i.e., to avoid hurting their average, to have a "gut," or to take a course outside their major.

A large percentage of students experienced no qualitative difference in their performance level in pass/fail courses while equally many (though varying slightly from school to school) said they did slack off. Students indicating enhanced performance were far fewer than either of these groups. The Sgan study showed significantly lower grade point averages in pass/fail courses (using letter grades submitted for pass/fail students) as compared to class GPA for the freshman, sophomore, and junior years. Although this study may only indicate that students take courses pass/fail in their weaker areas, it is compatible with student indications that they slack off. Conflicting reports by individual professors at Brown and Trinity regarding both the presence and lack of correlation between pass/fail and lower and higher grades were noted, though no school-wide studies had been made. Specific attributes, positive and negative, were assigned to the pass/fail system in very small and scattered numbers. Only dimunition of pressure, though in small numbers, was noted consistently.

Accompanying partial pass/fail systems is an unplanned increased emphasis on concentration. At Brown, 45% of the sample specifically indicated taking pass/fail courses only outside their major, while at Brandeis and Trinity pass/fail courses are not permitted in the major. In view of the slacking off in pass/fail courses and the greater emphasis upon graded courses, students are obtaining a greater major orientation at the cost of general education. This conclusion is a logical projection of the Sgan study as well.

Student participation in the pass/fail system has been high at each of the schools. At Trinity, which permits one pass/fail course each semester, the average student graduates with between five and six pass/fails. At Brown, where a student may specify any number of courses pass/fail, 85% of the students participate, in numbers decreasing by class--freshmen most, seniors least. Nonetheless, at Brown the perception of the risk involved in the large scale use of pass/fail has grown so that the absolute number of pass/fails each year has decreased from 63% to 52% over a period of three terms. At Brandeis, where 4 pass/fails are permitted with a one per term maximum, 52% of the seniors had participated though the school average was 39% with increasing percentages for each class. At RC, Michigan, the number and nature of the system are still in flux, but participation is high. The only exception to the large scale student use of pass/fail occurred at the University of Wisconsin, Green Bay, where the system was too new to make in-depth examination valuable. Only 238 pass/fails had been chosen by 215 students of the 4,000 in attendance in a system which permits almost unlimited use of the pass/fail option. The reasons for the lack of use are not clear, though it should be noted that much of UWGB student body are first generation college students and highly grade and job oriented.

ENTIRELY PASS/FAIL AND CREDIT/NO CREDIT SYSTEMS

All systems of total pass/fail observed had additional feedback components as well. Santa Cruz, for instance, employed written evaluations. The pass/fail system was viewed as insignificant when compared with the additional mechanisms so that pass/fail was acknowledged with little comment, although 22% of the students interviewed at the California Institute of Technology (Cal. Tech.) indicated a lack of feedback to compensate for the absence of grades. In addition, comments regarding credit/no credit in no way distinguished it from pass/fail. Since failure has become infrequent, no credit was seen to make little difference. Diminished emphasis upon pass/fail courses noted under partial pass/fail was absent owing to the elimination of the graded-nongraded discriminations. A small number of students, usually well under 15%, said they would have preferred grades. Individuals accurately characterized the system as permitting greater freedom for the motivated students and permitting the non-motivated students to flounder. As with the partial pass/fail system, positive and negative adjectives, employed in small numbers, counteracted themselves, though again, a decrease in pressure was noted regularly.

SPECIAL PROGRAMS PASS/FAIL

The Joseph Tussman Experimental College Program (ECP), a two year program at the University of California, Berkeley, occupying from two-thirds of a student's freshman and sophomore schedule, and the Harvard Freshman Seminar Program, a one semester freshman course for Harvard and Radcliff students were the special programs examined. Both utilize pass/fail grading.

These two programs were common in that they rely upon student self-selection in choosing their members. Self-selection is the process whereby a student volunteers to be part of a program. In each program, there was too large a self-selected group making it necessary to eliminate some students. The ECP did so randomly, while the Harvard Freshman Seminar Program did so through application forms and interviews.

The pass/fail system was criticized by none of the ECP faculty and only 7% of the Freshman Seminar Faculty. 68% of the Harvard students were positive compared with 24% who were negative, and 60% of the ECP students were positive compared to 20% who were negative. Only 6% of the Harvard students felt they had ignored their upgraded seminar for their graded courses. In both programs, the freedom and lack of pressure provided were frequently mentioned. In addition, creativity and other such expected adjectives were applied more frequently than to other programs. Goofing off was noted by those who disapproved of pass/fail rating.

PASS/FAIL FOR THE FIRST YEAR OR TWO

Two schools examined, Haverford and California Institute of Technology (Cal. Tech.), employed grading systems distinguishing between the early and latter years of college. Haverford generally uses only pass/fail for the first two years, although letter grades are recorded and, in the major field, occasionally released to graduate schools. ("The student request is a necessary, but not always sufficient condition for release of grades.") Cal. Tech. gives all pass/fail grades for the freshman year.

The differences in the employment of the grading systems at the two schools are profound merely because Haverford releases some grades. Cal. Tech. has not found it necessary to make these concessions because it is the most prestigious science oriented college in the country, with one of the two or three most able student bodies according to Cass & Birnbaum. Haverford, in practice, has created a partial pass/fail system outside the student's major. As a result, all of the weaknesses of partial pass/fail grading accrue to Haverford's freshman and sophomore grading system. There is, however, an even enhanced emphasis upon concentration since this is all that "counts." At Haverford, 29% of the students indicated that they were unaffected by pass/fail and 15% indicated that their grades did "count" (several of this group were Pre-Med). Nonetheless, student attitudes ranged between neutral and positive with many indicating a reduction in pressure.

Effects of pass/fail for the freshman year at Cal. Tech. varied dramatically largely because Cal. Tech. is a unique institute. Cass and Birnbaum characterized the Cal. Tech. academic environment as a place where "pressure for academic achievement appear among the most intensive in the country," a finding comparable to that of the authors. As a result, pass/fail makes a significant difference to students. One-third felt a real chance to adjust both socially and academically was provided while amost one-fourth of the students felt a much less pressured situation. These responses indicate a more positive environment for over 50% of the sample, although 15% would have preferred grades.

Students and faculty were generally positive with regard to pass/fail grading in the freshman year; 82% of the students and 53% of the faculty were positive, compared to 4% and 29% negative respectively. Only ⅜5% of the students would have preferred grades; however 22% of the students felt there was insufficient feedback to compensate for the absence of grades.

Fourteen percent of the student respondents at Cal. Tech. felt they had placed an emphasis more upon the major during the freshman year. Students entering Cal. Tech. already have a predeliction toward science, so that further removal from the social sciences and humanitiesis a serious problem. .One-third of the students indicated the pass/fail freshman year had caused them to slack off, while another third felt they had gained more from their studies. Nonetheless, a November, 1970 institutional research study, "A Study of the Pass/Fail Grading System at Cal. Tech.", which contrasted matched student samples before and after the 1964 grading change, indicated no significant objective performance difference between the student groups in cumulative averages, GRE's, attrition, or major choice. It is important that only 15% of the students felt any difficulty in adapting to sophomore year grading.

NUMERICAL AND LETTER GRADES

This section is based upon examination of Reed and Trinity Colleges which employ letter grades, and Haverford, which employs numerical grades. This material was supplemented by institutional grading analysis on letter grades by Jacob Cohen at Brandeis University and by the Committee on Academic Standards and Procedures at Wesleyan University, and on numerical grades by the Yale Daily at Yale University.

Student opinion regarding letter and numerical grades was largely neutral to negative. Faculty opinion was varied, from slightly positive to slightly negative with most neutral. Student reaction centered upon problems and suggestions for change extending to abolition of grades, but generally specifically directed to pass/fail grading. Faculty in contrast would shrug and say, "All grading systems are poor, but at least I'm used to this one and it's easy to use." This is not to say there were not small groups of faculty and smaller groups of students legitimately pleased with letter and numerical grading.

The most frequent criticism by faculty and students applied to numerical grades was over-specificity--providing an excessive number of categories. Faculty indicated a multiplicity of methods for employing the system. Some used each number divisible by five or ten as reference points while others used the entire 100 point scale. In addition, blanket grading (giving the same grade to all) was indicated by several, as were three, four, and more point systems. For example, one faculty member, using a three point system, said he used 90 as his honors grade, 85 as passing, and below 60 as failing. Dissimilarities in the use of numerical grading were rampant, resulting in a total disunity of procedure.

The very same situation exists in letter graded systems. The Wesleyan study notes, "The faculty as a group has not enunciated definitons of what various grades are supposed to mean nor has it any policy which defines its expectations about how the range of grades should fall . . .. This uncertainty can be underscored by pointing to the fact that we do not seem to know what particular notation should be used in order to indicate that a student is doing 'acceptable work'." The report felt this type of system "can only produce confusion in the minds of the new members of the faculty and student body." Similarly, a study of grading distributions at Trinity indicates wide discrepancies in departmental practices:

	SCHOOL WIDE	LEAST BY DEPARTMENT	MOST BY DEPARTMENT
A	23%	11%	50%
B	42%	7%	75%
C	14%	4%	36%
D	2%	1%	13%
F	2%	1%	13%

Such discrepencies are further illustrated by a study of grades at Brandeis for 1964-65 and 1969-70, which also shows a gross inflation of grades between the two years:

GRADES GIVEN BY DEPARTMENT:		1964-65	1969-70
	Mean G.P.A.	2.61	3.12
SCIENCE	High	3.32	3.50
	Low	2.44	2.77
	Mean	2.90	3.22
SOCIAL	High	3.09	3.80
SCIENCE:	Low	2.62	3.01
	Mean	2.95	3.19
CREATIVE	High	2.97	3.28
ARTS:	Low	2.88	3.10
	Mean	2.79	3.17
HUMANITIES	High	3.55	3.42
	Low	2.46	2.86
	Mean	2.81	3.17
TOTAL:	High	3.55	3.80
	Low	2.44	2.77

Grades often suffer from the weakness of being so simple to give that they are given with little real thought. For instance, the Wesleyan study notes:

> "1) In several instances last semester, grades were turned in for students who have been absent from courses for the better part of the semester or who have left the university.
>
> 2) In at least one instance--and possibly more--a grade was submitted for students who had never been enrolled in the course.
>
> 3) It is possible for students to be absent from Middletown for significant blocks of time--up to six weeks and in one case about six months--and still receive credit for the course."

Examination of the grades themselves indicate such systems poor as evaluative tools. Studies of Brandeis, Trinity, Wesleyan, and Yale indicate inflation of grade distributions in the "A" and "B" range. A Yale colation of grades for 1963-1967, the time at which numerical grades were abolished, shows a steadily increasing percentage of grades above 80:

GRADES ABOVE 80	Fall	Spring
1963-64	59%	
1964-65	61%	65%
1965-66	63%	69%
1966-67	66%	71%

The grade distribution for Trinity College for Fall, 1970 presented indicates that 65% of the grades were "A" and "B" while under 20% were "C", "D", or "F". Similarly, a Wesleyan study of grades for Spring, 1969 and Fall, 1970 (with very slight inaccuracies) indicates that 78.5% of the grades were "A" or "B". In a like manner, the Brandeis study showed an enormous increase in grade point averages between 1964-65 and 1969-70. No such study has been completed at Haverford. Reed has managed to avoid the inflation problem by establishing guidelines for grading distributions:

	A	B	C	D
FRESHMAN YEAR	15%	35%	40%	10%
UPPERCLASS YEARS	15%	45%	35%	5%

The distributions, according to the Registrar, are followed with the exception that there are fewer "A"s and "D"s than recommended. Faculty and students were basically neutral regarding the guidelines, though several faculty said they were difficult to get used to. As a result of the significantly lower grades, Reed administrators indicated difficulties with graduate and professional school admissions. The fact that a school with Reed's reputation is having any graduate school problems shows how widespread the inflation of grades nationwide has become. In view of the grade inflations, the grade point average would seem uesless except for making gross discriminations. The objective character usually attributed to letter and numerical grades is certainly not indicated by this study. Furthermore, professors, perhaps hoping to help out their students by giving high grades merely force graduate schools and employers to rely more heavily upon the results of standardized tests and personal impressions and influence, since the range and accuracy of letter grades becomes so limited. In addition, any feedback value the grade might have had for the student is negated.

An added danger of this disregard for the philosophy and intended mechanics of letter grading is the possibility of causing similar, more pervasive distrust and disinterest in other university ideals and structures. Students and faculty at all sample schools, however, indicated that this has not yet occurred.

GRADUATE SCHOOLS

Graduate and, particularly, professional schools have been one of the chief obstacles in the way of grading change. While undergraduate colleges have increasingly employed more individually and humanistically oriented evaluations, the graduate schools have been preparing to administer an increasing number of applications with greater efficiency. For Medical Schools, this has meant subscription to computer-based admissions services, which place students at any of a number of Medical Schools utilizing the center's services. The services have demanded of applicants similar easily codeable grading systems--letter or numerical.

A study conducted by Yale University in March, 1970, of 400 graduate Deans and Department Chairmen asked whether the abolition of the "F" grade in the four point grading system, which this report characterizes as an A/B/C/F system, would have negative effects upon the Yale student applying to graduate school. Two hundred and one responses were received from twenty-three schools, representing five "Ivy League" schools, ten state universities, and eight other schools--all considered prestigious. The results were as follows:

	No Effect	Possible Negative Effect
Anthropology	9	1
Biology	5	3
Chemistry	9	4
Economics	9	5
English	5	5
French	10	2
History	6	2
Mathematics	12	1
Philosophy	11	2
Physics	8	6
Politics	9	4
Psychology	2	1
Sociology	7	2
	103	38
Business	10	2
Engineering	5	5
Law	8	5
Medicine	8	4
Graduate School Deans	6	7
	37	23
TOTAL	140	61

The negative effects were more potentially severe in professional schools, where 38% pf the respondents felt negative effects were possible, than in graduate departments. Most shocking is that the majority of responding graduate deans (54%) expected possible negative effects.

Complimentary findings were obtained in a 1969 pass/fail questionnaire sent to graduate deans by William Hassler of Indiana University of Pennsylvania. Questionnaires were sent to 276 deans of the Council of Graduate Schools in the U.S. Two hundred and thirty responded to the three questions:

1. Does your school prefer pass/fail or letter grades in evaluating applicants?
LETTER GRADES-214 (97%) Pass/Fail-7 (3%)
"The vast majority shared the belief, "I do not see the pass/fail system being generally accepted in graduate school."

2. Would you accept for admission to graduate school or professional study students with recommendations and no grades?
YES-121 (64.7%) NO-69 (36.3%)
Several respondents indicated problems or conditions such as inability to give financial aid to such students.

3. If a student applying to graduate school or professional school submitted a pass/fail transcript, would you require additional evaluation?
YES-202 (95%) NO-11 (5%)
Far greater emphasis would be placed on the Graduate Record Examinations.

The responses of college administrators concerned with students applying to graduate schools (Registrars, Deans of Students, graduate school counselors) indicated experiences paralleling those predicted by the Yale and Indiana University studies. Any aberations from traditional letter or numerical grades severely hurt the middle range student, particularly in professional school admissions. This student can be characterized as the marginal student who would normally be admitted if his transcript had grades. The excellent student generally does not suffer since his empty transcript is supplemented by high GRE score and impressive recommendations. In terms of individual graduate school reaction, administrators indicated an inverse ratio between graduate school quality and the degree of opposition to non-letter grading.

At the twenty sample schools, with four explainable exceptions, the pattern observed was traditional grades accompanied by no graduate school difficulties or non-traditional grades accompanied by graduate school difficulties.

The deviations are consistent with the paradigm presented. Reed has experienced difficulties, according to the Registrar, because of its grading guidelines, which produce cumulative averages significantly lower than the inflated average of other schools. The difficulty occurs despite Reed's computation of cumulative averages and class rank. Cal. Tech. and New College experience no difficulty because of the exceedingly high GRE scores of their students. Cal. Tech. students average in the ninety-first percentile verbally and the ninety-fifth quantitatively, while New College students average in the ninety-eighth percentile. Although their students may, in principle, be handicapped by an absence of grades, they more than compensate for the lack of grades with GRE scores. The problems of pass/fail grading at the Experimental College Program at Berkeley were overcome by flexibility and small size. Files on each student were maintained and the faculty knew the students well, so grading difficulties could be remedied by writing letters, and even providing grades if pressed. This situation is also exceptional in that no concentration preparation occurred in the ECP; rather the entire major program was pursued in the letter-graded Berkeley College of Arts and Letters.

The problems created by graduate schools offer little promise of prompt resolution. It is important to realize that several administrators at universities with colleges employing non-letter grades are unwilling to affect change in grading admissions policies at their own graduate and professional schools. Residential College administrators indicated that even Michigan Medical School, which subscribes to a central admissions service, would not accept written evaluations, while Michigan Law School will accept the evaluations but would not promise to read them. Similarly, many graduate departments at Brown indicated they would not consider pass/fail graded Brown students.

The graduate school admissions, a seller's market, has caused several schools to initiate changes in their grading structure designed to help students. Santa Cruz permits students the option of electing letter grades in basic science courses, a concession for medical school applicants. Haverford permits students to send their major grades earned during the pass/fail freshman and sophomore years to graduate school, upon receiving permission of the Associate Dean of the College. Permission is required in order to prevent students from sending their entire under-class transcript to graduate schools and to prevent the schools from pressing the students to do so. As indicated previously,

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these changes have had deleterious effects on both grading systems. One of the schools in the study even indicated translating evaluations into grades in order to help some of its students.

Very frequently, the student's attitude toward post-college study was the prime reason offered for the use made of the college grading system and the major factor in the associated anxiety level. The effects have been most profound and easily observable at Brown. Fifty-three percent of the student sample unsolicitly expressed graduate school apprehension, citing it as the rationale for their use of the grading system. Forey-eight percent of the faculty indicated concern over graduate school reaction to the grading system. The results of tehse fears have been dramatic. AT Brown, where students may elect any number of courses in any semester pass/fail, the number of courses so selected has dropped steadily from 63% to 52% while the number of students taking the majority of their courses pass/fail has fallen steadily from 52% to 37% in the first year and a half of this grading system's operation. Similarly, the number of students electing no pass/fail courses has risen from 11.3% to 15.5% while the number of students taking all courses pass/fail has dropped from 40.1% to 26.8%. It is clear that graduate school practices alone have succeeded in completely undermining the Brown grading structure. Students in other option-systems, notably pass/fail, indicated similar use of the pass/fail as utilized at Brown.

CONCLUSIONS

ADVISING

Administrator: "There are six advisors for the 4800 freshmen."
Interviewer: "You mean, each advisor has 800 students?
Administrator: "No, we like to think that each student has six advisors."

Universities, until quite recently, clearly distinguished between the affective and cognitive components of learning, emphasizing the cognitive almost entirely. This division is still present in most university counseling programs, manifest in a separation between academic and personal advising facilities. Only academic advising was discuseed.

Incompatible definition of the advising function is a significant problem. A multitude of variations in the responsibilities implied in the advising job description were cited by faculty and students. These responsibilities formed a continuum that included performing an administrative function, providing academic information, being a tutor, serving as a personal counselor, and being a friend. The problem occurs, for example, when a student wanting a friend is paired with an advisor who feels he should only perform an administrative function. Perhaps the best advising system would be based upon similarly defined advising function by faculty and students.

Required advising is a tradeoff. Although it does weaken the advising structure the impact is minimal since advising is already severely debilitated; however, compulsory advising is inefficient by using faculty time merely to rubber stamp student programs. On the other hand, the requirement was noted by small numbers of students to have ultimately caused a good advising relationship and to have prevented serious program mistakes.

Student advising at Brown and Justin Morrill was successful in increasing students' familiarity with curricular possibilities, but it is important to realize that it is a palliative and not a cure. It does nothing to solve any of the difficulties specifically attributed to faculty advising. However, if the alternative models discussed for the improvement of faculty advising are for some reason unfeasible, then student advising is a valuable ameliorating tool.

The freshman inquiry has strict limitations, though receiving by far the most positive response of all advising mechanisms discussed, and incurring the least expense. The most obvious problem is that the session is a "one-shot deal." After a student's hour before the board, the feedback from the group is over, although a few students indicated that they planned to maintain contact with board members other than their advisor.

Academic advising was shown to be uniformly unsucessful, with the exception of Sarah Lawrence College where faculty were recruited and rewarded for their dedication to students. However, the Sarah Lawrence system required a faculty commitment of a full day and a half a week to advising which most schools would consider prohibitive. Elsewhere advising was unable to serve the minimal function of providing students with sufficient knowledge to use the resources of the college to the student's greatest educational advantage. All of the additional structures mentioned improved advising somewhat, but failed to attack the basic problem. The most unabridgeable of problems is that inherent in all of American higher education, but made obvious by the special nature of advising; the faculty reward system which relegates advising to a non-priority position and mitigates against faculty ever acquiring in-depth knowledge of areas outside of their departments.

The American orientation of universal higher education, which must attempt to increase efficiency in dealing with steadily increasing numbers of students, has also adversely affected advising. Advising has been simplified to the point that the affective component has been eliminated, in favor of the more easily tended cognitive component, manifest in the designed superficiality of student-faculty advising assignment. To create a more useful and effective relationship, advising must look at the whole student, initiate new methods of advisor assignment, and provide better opportunities for the growth of the advising relationship.

No advising system has been studied which satisfactorily remedies either problem. The Freshman Inquiry, to a small extent, ameliorated the former while the freshman seminar somewhat improved the latter, however, both structures offer serious limitations, which were discussed previously. Inclusion of such models and application of new techniques, some of which received prior consideration, is imperative for the maintenance of faculty advising, but more importantly, colleges must rerationalize the basis for which advising was instituted, considering the problems encountered,which include those discussed and others such as the unwillingness of significant numbers of students to use advising, and the goals desired. Rather than continually refurbishing the old faculty advising system (for which sample administrators commonly indicated plans), colleges should be willing to throw away this model if it is found unworkable or experimentally surpassed by use of students, administrators, or other more effective forms.

GENERAL EDUCATION

All general education efforts must be viewed in the context of growing professionalization of higher education. The university reward system has become geared to increased specialization to such a degree that teaching and interdisciplinary activities are excess baggage which can safely be scuttled without endangering one's career.

Accordingly, departments which have grown in importance to dominate most institutions, view additional teaching, and interdisciplinary activities as a misdirection of limited resources, and are unwilling to supply faculty for general education. Faculty too have learned what is important; a junior professor interested in monetary or professional advancement is not going to get either by becoming a fixture in Western Civilization.

Nevertheless, general education has been sufficiently important in undergraduate education for college administrations to have been willing to force departments to supply faculty. Traditionally departments have offered their most junior people, who have been anxious to become disengaged from general education as soon as possible, resulting in a very high turnover rate. Since faculty are highly trained in only one area, it is difficult for them to teach interdisciplinary programs. The need for time to adopt to the wider general education area, combined with an excessive turnover rate has maintained the quality of such programs at an absolute low. The high degree of competition and individualistic isolation currently implied in the concept of academic freedom made it impossible for faculty to work together in a collaborative fashion. Accordingly, the success of general education programs is poor.

The paradigm just presented, has been essentially accurate at all the programs examined, with the exception of the St. John's Great Books program. They have broken down largely because of the failing of the decentralized departments administering the various segments of the general education program to work with a degree of interaction.

Programs dependent on faculty integration have fallen apart when faculty contact became more than minimal, even within the six member self-elected Experimental College Program at Berkeley. The cooperative faculty programs which have tried to avoid any real level of faculty interaction have been universally characterized as incoherent. Programs attempting any real level of internal coherence above that achieved by a smorgasbord distribution have consequently failed.

General education has been moving from group efforts to individual efforts, and from university efforts to departmental efforts. Historically, the general education trend has moved from core courses and core curricula to distribution smorgasbords, and recently to freshman seminars. Interdisciplinary core programs, demanding integration and collaborative faculty effort, have, for the most part, been abandoned. Smorgasbord distribution, which usually depends on departmentally sponsored general education courses also doubling as the department's introductory courses for majors, have become more common in recent years. Today, the freshman seminar, which encourages faculty to teach freshmen the area they are currently researching making it unnecessary for anyone to do broad general education teaching, is popular.

Justin Morrill and the Residential College are poor examples of how a Core distribution program works at graduate oriented and rigidly departmentalized schools, since both are experimental internal colleges having neither graduate students nor departmental-division structures. For these reasons, both have been comparatively unsuccessful. At many schools, however, Cores are composed of departmentally administered courses and interdisciplinary Core courses. The inevitable decline of the interdisciplinary Cores at such schools has been discussed in the section on the Core Course. Departmentally administered courses suffer from a serious lack of integration, as is pointed out in the discussion of Directed Studies at Yale, or are made into introductory major courses, as occurred when the second year of Contemporary Civilization was turned over to departments at Columbia. The result is always a continual dilution of the requirement in an attempt to ameliorate the rising level of student and faculty dissatisfaction until a smorgasbord distribution requirement remains. While distribution requirements were shown to be superfluous in all areas except the natural sciences where social science and humanities students would not ordinarily take courses, guidelines failed to encourage a pattern of student distribution ,although the effect of the resulting free elective system is unclear. The Freshmen Seminars, which Trinity and Haverford used to supplement guidelines at all schools improved the advising system, provided faculty with a lab with which to try new curricular ideas, permitted students to meet a faculty member early in their college career, and helped freshmen adjust to college through a small group experience. However, seminars were expensive, frustrating for freshmen when unstructured, difficult to get faculty to teach and probably more academically valuable for upperclassmen. Nonetheless, faculty and student participants in general felt seminars were a positive addition to the freshman year.

The Yale Directed Studies Program, the Berkeley Experimental College Program, and the St. John's four year Great Books Program represent a continuum from which to examine faculty roles and structures in higher education. The Yale program is assembled on a departmental basis so that all of the problems of division of material into departmental boxes, lack of coordination in content and effort by participating departments, and forced participation of junior faculty were present.

The Experimental College Program, at the University of California, Berkeley, had a uniform nondepartmentalized curriculum and a self-selected full time faculty; therefore none of the specific problems mentioned at Yale were applicable, however these problems were manifest in more damaging and insurmountable personal ways. The faculty were unable to work together so that most attempts at cooperative planning failed completely.

St. John's College has avoided the practices of Yale and the Experimental College Program because of a difference in emphasis. The curriculum is not divided and there are no rewards for specialization; rather each faculty member is required to prepare himself to be able to teach the entire curriculum. Similarly, faculty members are encouraged to audit each other's classes; an abandonment of the current concept of academic freedom which is commonly construed to bar faculty from each other's classes. As a result, St. John's has succeeded in creating the best functioning of the three general education programs.

It should be understood that each of the programs has a unique set of strengths and weaknesses, and all three have succeeded far better than most other general education programs discussed.

With an increasing technological need for greater specialization, general education is increasingly important to provide a basis for common humanity among people. Specialization isolates people, underlines their differences, and is, in this sense, divisive. General education is capable of providing a commonality sufficient to surmount the differences in vocation.

No program examined succeeded in providing this type of general education with the possible exception of St. John's. The failure of general education lies in the division of people and knowledge into discrete containers. At the modern university, prescribing that students take a course in language, a course in science, and a course in history means not that the student obtains a more humane view of life, but that the student is taught scholarship from the point of view of language, history and science. Such courses have distinct boundaries and relate to each other in no practical way. The type of general education desired is that which seeks to build bridges where these boundaries now lie. One of the atomic scientists who worked on the Manhattan Project said he felt as little responsibility for a bomb as a maker of cans should feel when a can is thrown through a window. Looming even larger than the question of right or wrong, is the man's isolation to such a degree that he was unable to see the next step beyond his atomic theory work. The kind of general education which is necessary to combat this problem is not necessarily an interdisciplinary course mounted by three departments and taught by five specialists. Even a program administered by a single department with a humanization component would be satisfactory-an inbuilt dimension showing commonality, showing where the field stands with regard to the rest of the world.

This is where general education courses fail. There are few general educationalists left. Scholarship forces scholars so far apart that they can no longer understand each other. These men are clearly unable to help their students perceive the breadth of their endeavors. Until this situation is reversed through changes in graduate education and reward systems, general education will remain as it is. College can begin to approach this problem by use of incentives in general education efforts. Encouraging departments to move together instead of further apart is imperative. Universities have reached the point where professors in the same department cannot understand one another. People from various areas must get together and teach each other, and, in so doing, guide their students.

FACULTY STRUCTURE AND CONCENTRATION

An emphasis on divisions has limited beneficial effects. It does, through the interaction necessitated by meetings, force professors to meet colleagues outside their fields, although, for at least the four schools studied, Bard, Florida Presbyterian, New, and Reed, it did not produce the anticipated increase in interdisciplinary or team taught courses. Divisions seem to be almost essential for schools with small faculties, as was made apparent by professors in departments smaller in size than three. This suggests that decisions regarding faculty hiring priorities, course offerings, etc. need to be made by a group large enough to present a diversity of opinion, but small enough to be manageable. As a result, divisions have been seriously suggested as decision making units only in small schools. However, an inevitable chain of events follows the growth of a school which employs a working divisional system. This can be seen clearly at Reed where the Division of Literature and Languages has increased in size so that a split into two divisions has been considered. If Reed continues to grow, it is possible that the French professors, for example, might in the future dominate the Division of Languages, then start to meet together to discuss their common and unique problems, and eventually become a department, in fact, if not in name.

It seems, therefore, that merely shifting emphasis from departments to divisions will eliminate few of the problems raised by departments. The Santa Cruz structure, despite the objections noted, seems to deal effectively with the problems raised by departmentalization in two of the three divisions, with faculty in the third division feeling only unaffected rather than harmed by the system. It must be realized that the Santa Cruz faculty were aware of this structure when they were hired so that a similar plan might not meet with equal enthusiasm at another school. However, the assignment of faculty offices on non-departmental lines might be an easily implemented device for reducing departmental inbreeding and perhaps stimulating interdisciplinary, team teaching.

There is no reason to endorse one concentration scheme as optimal for all. The existence of schools with well specified philosophies regarding concentration is important, but it is equally important that all faculty and student applicants be aware of the options available at such schools.

Since no concentration scheme was shown to have insurmountable structural difficulties nor serious graduate school problems, there is no reason to recommend any system which denies the greatest student lattitude, unless such a program would conflict with established institutional philosophy and goals. This is not to say that a major has necessarily been shown to be of intrinsic value in an undergraduate education. Three sample schools, Sarah Lawrence, St. John's and New College are doing very well without them. However, if concentration is felt valuable and maintained, the initiation of student created majors offers students the greatest degree of flexibility with the least associated costs for the school. Faculty, students, and administrators at schools utilizing student created majors overwhelmingly felt their quality to be at least as high as that of departmental concentrations. While student created majors seem to be an option of value to only a small percentage of the students at sample schools, there is no reason to suggest that the programs are failures because they can't compete in numbers with traditional majors.

Required student created majors force each student to address the questions of what he wants to learn in college, encourages the planning of programs rather than mere enrollment in random courses currently the rule within many departments, and is compatible with the prevalent disciplinary organization of the faculty. On the other hand, such a program in schools lacking Justin Morrill's enormous faculty-student contact time would entail a much increased outlay of time and money, though not necessarily prohibitive when contrasted with the impact upon students. In addition, a faculty review board designed to maintain academic quality, usually included in student created major programs, would become very costly, requiring an enormous commitment of faculty time. The omission of such a board, however, enhances the possibility of all the potential problems attributed to student created majors.

COMPREHENSIVE EXAMINATION AND SENIOR YEAR

Comprehensive examinations appear to be less than a stunning success. While many professors at each of the colleges expressed justifiable enthusiasm for the idea of asking each student to review their progress, few students outside of Santa Cruz found this process to be a significant part of the comprehensive. The fact that the "exams" were graded tended to make the experience a mere certification stressing passage instead of information transfer, which combined with the lack of rigor manifest in the low failure rate, precluded deep review and study of the previous two, three, or four years. While it would not be worthwhile to continue an institution such as a comprehensive exam simply because it fit into most professor's concept of a college, the fact remains that at least a few students in each sample derived some value from the exam, and it seemed harmful to only one or two. For example, the student at Santa Cruz who switched her major to avoid what she understood to be a particularly rigorous comprehensive. The negative effects created by the exam can be mitigated by better informing students of its nature and purpose. The larger question, however, is how to make the experience meaningful for more students.

An answer may be provided by the model of the Freshman Inquiry program initiated at Haverford in 1971 (see Advising). This model would turn the "exam", regardless of the year in which it is given into an oral advisory session. Thus sophomores or freshmen might discuss their plans for study and whether the department in which they intend to major is best suited to their needs, while juniors or seniors could discuss what they have learned,what they want to do next and how best to proceed. It is clear that part of the success of this approach at Haverford is attributable to the program's newness, and whether its appeal will last remains to be seen. It is also apparent that the use of comprehensive exams to weed out unqualified students has failed so that it would be reasonable to formally strip away all pretenses in that direction. As an addition to a system which, in most cases, includes college boards, graded courses, and various types of standardized graduate exams, another written or oral comprehensive exam is unnecessary. If a satisfactory advising function for the structure created by comprehensives can be devised, it should be used. If not, the comprehensive should probably be abolished. The continuance of institutions for functions no longer utilized only serves to lessen the participants' respect for that institution, and, by extension, for all associated institutions.

Of the three senior seminar programs studied only Bowdoin's had become an even remotely important part of the student's college experience. Bowdoin's relative success was attributable to the well-planned nature of the program, the active participation of students, faculty, and administrators, and the availability of funding commensurate with the needs of a comprehensive program.

Nevertheless, a well administered senior seminar program like Bowdoin's will noticeably alter the education of few students. For most, the seminar, even if it is good, is merely one course dwarfed in a year of fulfilling concentration requirements and does little to topple the pyramid of narrowing specialization found in the college years. Expansion of the single-course into an academically comprehensive senior program will be necessary to even balance and place in perspective the emphasis upon concentration in the last two years of college.

The diverse inputs attempted for the senior year, despite their varied nature and outcome, show that this year can provide a useful culminating experience through effective programming. However, this cannot be accomplished merely by the half-hearted establishment of a course for seniors as attempted unsuccessfully at Justin Morrill and New College. Such courses have failed in all aspects, most specifically in allievating the overspecialization of seniors. Rather, the successful efforts must involve the commitment of faculty, administrators, and students in a more comprehensive program, as in the senior thesis at Reed and Bard; or the senior program at Bowdoin, which also required a substantial allocation of funds.

While this institution of the senior thesis was the most successful offering studied, the other programs have been important if only for pointing to the barrenness of the senior year at most colleges. If colleges maintain the length of the student's tour of duty at four years, or even three or five years, the programs ultimately selected must reflect the changing needs of students in each academic year and the goals of the institution.

EXTRA DEPARTMENTAL CURRICULAR INPUT

Extra departmental curricular inputs are very difficult to evaluate. Most of the programs in this area are relatively new but, more importantly, they're planned for very individual experiences. Each of the projects undertaken or courses taught are largely the personal efforts of one individual, whose ultimate success or failure said little about the program in which he participated.

All that can be said in general of the programs studied is that each sponsored a mixture of individual results, but was felt to be very positive by participating and nonparticipating faculty, students, and administrators.

The chief obstacles afflicting these efforts are those noted for all of the curricular structures examined; that is, faculty unwillingness to participate and student inability to creatively use the mechanisms. Nonetheless, student enrollment in the programs examined was generally high, so high that some students were commonly closed out. Similarly, increased faculty participation was obtained with the initiation of additional incentives.

However, expansion of such programs would make good sense. No university can mount as many courses taught by experts as cheaply. Offering courses with stipends of $500 to $1000 per course means that six different authorities can be brought into a school at a total cost of $3000 to $6000, a figure which can't be matched by departments. Introducing such courses means multiple hirings of short duration in many areas.

Negative effects were noted, but they were small. The presence of the Experimental College at Tufts has encouraged some departments to avoid experimental undertakings and independent study, however, the innovative impact of the College upon the University, through the adoption of college programs by the University and of courses by the departments, has been far more significant. The open-ended extra-curricular programs have succeeded in obtaining sufficient faculty to offer strong programs while also utilizing community and outside resource people. Student use of the innovative mechanisms within these programs has been low; however student enrollment in courses has been very high, so high that many have been turned away. At both Brown and Trinity, few faculty participated in the program and very few even indicated a desire to participate. The non-funding of the program served to reinforce the faculty disinterest. Students regularly complained that too few courses were offered, so that they were turned away or forced into a large class. It is important to note that no level of commonality was found in the courses comprising either program, which is to say that both programs consisted of groups of entirely divergent courses with no unity between them. Only the fact that departments would prefer not to mount such courses makes a university course program necessary. All of the programs examined represent ways of filling in the gaps and transcending the limitations of university compartmentalization of knowledge. In achieving this goal, the small university course programs at Brandeis, Brown, and Trinity are of minimal value; however, such programs are not without merit since they do provide courses in some lacking areas and maintain the understanding that knowledge does exist outside of the departmental structure.

Peer group teaching has been the weakest of structures incorporated in extra-departmental programs. This is to be expected since students prior to such courses have been taught to regard knowledge as a quantity dispensed by an omniscent teacher. In stressing this exclusive role of the teacher, the value of individual thought, and peer group interaction are minimized. The combination of belief by students that knowledge must be transmitted by an expert, a role which only a very rare student-teacher can fill, and the belief that peer learning is inferior to teacher learning assures that most peer taught courses will not succeed. The inbuilt lack of success does not imply, however, that non-expert student courses should be eliminated, rather they need to be seen for what they are--peer group cooperative learning efforts as employed at Brown in the Group Independent Study Projects (GISPs). This method groups students together with common learning interests, maximizes the learning feedback, and cuts down the number of individual independent studies. In this manner, the GISP is effective in minimizing university costs through the use of faculty only as resource people, and helping students begin to realize the existence of other learning models, specifically that excellent learning opportunities can accrue from peer group interaction. One problem noted in the GISP at Brown is that students who wanted to teach did so through the GISP which upset some course members who desired a cooperative learning experience. This problem can be assuaged by explaining prior to enrollment whether the course will have a leader.

For the student who merely wants an opportunity to teach, the Trinity High School Seminars and the Tufts community seminars would seem a better channeling of his efforts. Both programs were cost-free and provided community outreach which is desirable for the community as well as university public relations.

Independent study at Justin Morrill, as at New College, suffers from being required. For both schools, this means that a smaller percentage of students are happy with their experience because the program is not self-selective. Yet, in numbers, it is clear that requiring independent study rather than leaving it optional provides a beneficial experience to more students, mostly because many who feel timid or inadequate are pushed into doing something they are quite capable of. This establishes a difficult decision for a college to make. If the undergraduate college education should prepare students to study independently in the future, then the availability, encouragement, and even requiring of a somewhat controlled initiation to such study should be an integral part of a college program. However, a program merely pushing students out of the university for the sake of providing any independent experience is ridiculous. The lack of follow-up plans after Justin Morrill field studies is indicative of the basic fallacies of such programs.. Effective programs must rely upon a strong counseling system and have succeeded most fully when planned by students in areas of specific interest.

Initiation of the program described is more expensive since it requires a counselor and placement staff. Similarly, it must be realized that, unless field experiences include salaried activities, experiences incurring additional cost, such as foreign study will result in added cost to the student or university.

GRADING

Many in the academic community have long characterized grades as mechanical and dehumanizing, so that both students and faculty have felt pressure to discount their value. However, all interviewees were well aware of the great impact of grades on students' lives. As a result there may have been significantly more role playing with regard to grading than any other aspect of the study. A very large number of sample members indicated indifference or neutrality with regard to grading, occasionally scoffing at interviewers for their interest in the subject, while negative influence, i.e., anxiety in covert grading systems, was more often attributed to others than oneself. Similarly, respondents talked longer about grading than most topics combined.

In view of the multitude of weaknesses indicated in all sample evaluation systems, an ideal grading method has clearly not been examined, so it is necessary to construct an evaluation format maximizing the strengths of all the methods examined. At this time, the authors would propose a dual system consisting of letter grades for both external and internal use and modified written evaluations for internal use only.

Letter grades were shown to be one of the poorest systems examined, suffering from diversity in meaning, capriciousness, lack of consideration in handling, highly inflated distributions, and a very high degree of subjectivity. However, graduate and professional schools want them. It has been demonstrated quite clearly that virtually any university adopting other than a traditional system of evaluation is placing its students in jeopardy with regard to post-college admissions. As a result, it is recommended that letter grades, if not substantially improved, be maintained only until such time as a meeting of a sizeable number of colleges approving a unilateral action with regard to alternate grading practices can be convened. In view of the greater value and degree of success of several of the other grading systems, it is felt that such a meeting of colleges is imperative. The alternative is for the leadership of individual schools with a strong inclination for another grading model to be ready to commit sufficient resources (money, time, personnel) to teach the external community of the value, method, and desirability of that system. Chances of complete success are not high, but vary with the type of grading change,the quality of students, and the test scores offered graduate schools.

Associated with maintenance of letter grades, however, is the necessity to arrive at a definition of grades, translatable into a meaningful system, to the understanding of all students, faculty, and administrators. This too will require a re-education within the university community and without to the graduate schools. Administrative teeth will be necessary to insure faculty compliance to such a system.

The lack of feedback in-built in letter grades, designed to provide only a peer group ranking, is low, but when combined with the multitude of methods utulized by faculty for assigning grades, the level becomes minimal.

Written evaluations, though methodologically and structurally weak, were found to provide the greatest degree of individual feedback in spite of their high failure rate. As a result, a modified system of written evaluations is recommended for use only within the college.

Internal use alone is specified to maximize the degree of honesty between student and teacher, since many faculty indicated toning down their evaluations owing to their public use. In addition, evaluation systems were found to be very costly when maintained for outside use (Xeroxing, filing space, and administrative time) and too bulky and diffuse to be of value to graduate schools. Copies of theevaluation proposed would be sent only to the student, the specific faculty instructor, and the student's advisor. No university record of evaluations would be maintained.

The evaluation itself would consist of a student self-evaluation and an instructor's evaluation. The evaluation process would begin with a student submitting to an instructor a self-evaluation explaining: 1) what the student did in the course, specifically describing readings,.projects, discussions, and less material items; 2) a critique of the student and the course; 3) any follow-up plans the student has relating to the course. Faculty evaluations would ideally discuss the student's evaluation and include additional comments, but at least it would serve to rationalize the grade given by the faculty member.

Such evaluations would be mandatory for students during the freshman year and periods of academic probation. The freshman year is a critical time of transition into an alien environment stressing a type of performance very different from that expected in high school. Only written evaluations can provide the feedback which freshmen and failing students need to adequately assess their strengths and weaknesses. Moreover, findings of this study show freshmen to be shy or intimidated with faculty, to the extent that approaching a professor for this information would be unlikely for many.

Evaluations of the same format would be optional after the freshman year. Evaluations could be required, however, upon the initiation of the professor or a student. In the case of an evaluation initiated by the professor, the requirement would be as any other requirement in a course, so that students would have to prepare the self-evaluation necessary to get the ball rolling. A student initiating an evaluation would be required by a date set earlier in the term, to inform the professor of his intent to seek an evaluation. Faculty would likely respond more favorably to these evaluations than several of those discussed at other schools, since several sample professors indicated writing evaluationsof poor quality because they thought students did not care about them. However, the student requesting an evaluation would by virtue of his self-evaluation indicate a high level of interest.

There is no reason why students not caring about the evaluation, after a year or more's experience with them, should waste either their own or the instructor's time. When an instructor feels he can say something valuable to such a student, he can require a self-evaluation and comment upon it. This would avoid the problems noted at schools with all required evaluations of contentless comments written without much thought.

This model permits students and faculty to assemble a collected dossier of the student's performance, but also for faculty members to obtain feedback on their teaching and course quality. Moreover, such a system is necessary for students who, in each segment of this study, exhibited litttle initiative or thought regarding their education. The self-evaluation would force them to begin to think about their studies. In addition, the student's self-evaluation is a good focusing device for faculty who often complained that they did not know what to write in an evaluation. The student self-evaluation informs the faculty member of the areas about which the student is concerned, thus giving the faculty member a framework in which to structure his comments. Self-evaluations of this nature were highly praised by students made to write them at Haverford for the Freshman Inquiry.

Assuming that this method is no more successful than the current written evaluation systems, which is unlikely because of the several improvements suggested, the system will still be a valuable addition to the letter grades. With written evaluations, faculty members indicated more emphasis upon rationalizing their grades, which cuts down on the incidence of grades being given to students not enrolled in the course or the university cited at one school. But , more importantly, even if the written evaluations were only moderately successful, the instances in which students received detailed evaluations that really helped them--which was common in all written evaluation systems studied--would be a beneficial addition. There is far less harm in providing a few bad evaluations than in providing no feedback at all.

The only remaining disadvantage would be cost. While the cost of maintenance would be eliminated, the minor cost of printing, and the less minor cost of faculty time would remain. Since the system is only required for one year, however, the amount of faculty time would be significantly reduced, and more purposefully utilized owing to the use by only interested students and faculty.